The Builder.

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Harbour Construction.

ANOTHER volume has been added to the list of Messrs. Longmans' Civil Engineering Series,* the subject being "Harbour Construction." As the design of this class of works demands a knowledge of wind velocities and pressures, waves, tides, and ocean currents, the preliminary chapters are devoted to these phenomena. The difficulties met with in the measurement of wind pressure arise chiefly from its variable nature, the sudden gusts bringing into the indications the momentum of the movable parts of the mechanisms employed, which tends to considerably increase the apparent pressures. The author does not refer to the investigations of the "Wind Committee,"† who recommend, as the result of their inquiries, that the maximum wind pressure in bridge designs should be taken as 56 lbs. on the square foot, corresponding to a velocity of seventy-five miles per hour; but in exposed positions, on the coasts, this pressure is, no doubt, occasionally exceeded over limited areas. The consideration of the wind naturally leads to that of ocean currents, which owe their persistency mainly to the winds and to the increased heating of and evaporation from the waters of the oceans as the equator is approached.

The question of waves is one which cannot be investigated fully without the help of the higher mathematics, but there is one case in which the formula for the velocity of propagation is very simple—that is, when the length between the waves is great in comparison with the depth of water, in which case the velocity is the same as that for a body falling freely from a height equal to one-half the depth of the water. There are two cases of wave motion which concern sea-works—the one where the motion is purely oscillatory, when each particle of water moves in a closed curve; and the other, a wave of translation, when the mass of water in the wave itself moves forward in a body. The former are converted into the latter in shallow water, and these give rise to many of the difficulties in constructing and maintaining marine works. The height of waves is a subject on which very exaggerated notions usually exist, chiefly owing to the poetical fancy of waves running "mountains high"; but, as a matter of fact, 45 ft. or 50 ft. is the maximum height of which there is confirmatory evidence, and this only occurs in very exceptional cases. On the other hand, the pressure exerted by waves of translation on a fixed vertical surface is so great as to be almost impossible to realise without seeing its effects. When blocks of stone or concrete weighing 20 tons are lifted 12 ft. in height over a breakwater and are deposited on the other side, as has happened, for instance, at the Ymuiden breakwater, at the entrance to the North Sea Canal, the mind is prepared to believe that pressures of 3 tons per square foot have been recorded. The subject of waves of translation naturally leads to the consideration of the tidal wave, of which the author gives a popular and readable account. The consideration of this subject is shorn of its chief difficulty immediately one grasps the reason why the sun or moon produce tides on both sides of the earth concurrently, *i.e.*, owing to the intensity of its attraction on the water, on the near side, being greater than its intensity on the remainder of the earth as a whole, whilst the latter is greater than its intensity on the water on the far side; consequently, on the near side, the water is drawn from the earth, and on the far side, the earth is drawn from the water.

The most suitable position for a harbour depends chiefly upon the purpose for which it is required; for a harbour of refuge, it must be so situated that vessels may obtain shelter under any condition of wind and weather, and should naturally be on a much-frequented part of the coast, easy of access, convenient for ingress and egress, and with a bottom affording a good holding ground, such as clay, or silty sand. Facilities for obtaining, in the first instance, the materials required for building, and afterwards ordinary supplies, are also essential. When the object is to protect, or render accessible, the entrance to a port, there is, of course, less choice as to its position; but, in all cases, to enable the most suitable sites for the breakwaters and entrance to be fixed upon, a detailed survey and soundings are required, with observations of the tides, currents, heights and directions of waves, littoral drifts, prevailing winds, and fetch. The contours of the sea-bed, near the coast, affect the direction of the waves, consequently waves of different heights may approach at varying angles. The current along a coast is generally increased in velocity at the extremity of breakwaters built out from the shore; and it is sometimes an advantage to extend the weather pier seawards to afford shelter to entering vessels, and to let the detritus in suspension get away to leeward before encountering the cross-current. The heaviest waves are not always in the direction of the greatest fetch nor of the prevailing winds; a promontory, with the wind in a suitable quarter, may cause waves to wheel round it, which would be more destructive. The entrance to a harbour should be so situated that vessels may enter it with ease during the worst gales, *i.e.*, nearly facing the direction of the heaviest seas, and the shape of the harbour so arranged that the waves entering at such times shall be rapidly dissipated, owing to the ample area enclosed. The entrance is occasionally protected by an outside breakwater, some distance seawards, or, if very still water is required, sometimes an inner harbour is formed.

In the case of an estuary harbour care must be taken not to contract the entrance sufficiently to prevent the flood-tide getting up freely, or the volume of the ebb-tide would be reduced, and the scour, which is necessary to keep open the channel to the entrance, would be diminished. The width must also be great enough to keep the velocity of the ebb current small enough to avoid any difficulty of ingress at such times.

Breakwaters are generally built with a vertical face, if constructed with suitable material; for then, the upper blocks being directly over the lower ones, their weight has more power to keep the latter in position; and, moreover, the force of the waves is dissipated without the water from the breaking wave rising so high, as in the case of a curved structure. In such a case, if the foundation is on rock, the portion below low water of a neap tide is frequently built of concrete mass-work, deposited inside temporary frames fixed by divers, or it is built

* "Principles and Practice of Harbour Construction." By William Shield, M.Inst.C.E. London: Longmans, Green, & Co. 1895.

† "Report of the Wind Committee." London: Eyre & Spottiswoode. 1881.

up of large blocks of concrete, put together and allowed to set on shore, or of green concrete in bags. The weight of these blocks and bags of concrete often exceeds a hundred tons. Above that, level concrete blocks bedded with Portland cement mortar are often employed, with a capping of concrete mass-work. Large cranes, called "Titans" or "Goliaths," are used to place these blocks or bags in position, and they are always set as headers, in order to present as small an area as possible to the waves. Concrete mass-work is generally deposited from a skip with a hinged flap bottom, which is opened when the skip has been lowered so near to the concrete already deposited as just to allow the flap room to swing. Sometimes bags are used instead of skips, lowered mouth downwards, right on to the concrete, before the mouth is opened, so that the amount of cement thus lost is reduced to a minimum. If the foundation is not solid rock, blocks set at an angle to the vertical adjust themselves more easily as the foundations settle. In such cases, unless the water is very deep, the sea bottom on the exposed side will require protecting from the downward force exerted by the impact of the waves upon the breakwater, by means of wave-breakers, consisting of large blocks of concrete or stone extended seawards with gradually diminishing blocks, until a depth of water is reached at which the waves do not affect the bottom.

In case the lower part of the breakwater is made of tipped rubble, its direction should be such that the heaviest seas break square to it, to prevent the rubble travelling along it. The slope the latter naturally takes, under the action of the sea, is entirely altered immediately the superstructure is built on the top, owing to the wave action just referred to, and similar means of protection must be resorted to. Rubble mounds composed of stones half a ton and upwards in weight will not be disturbed by heavy seas at depths of 12 ft. to 15 ft. below low water spring tides, whereas with a superstructure such rubble is often disturbed at depths of 20 ft. to 30 ft. The height to which such rubble mounds are carried is a matter of considerable moment; as waves break in a depth of water not less than their height, the shoaling of the water, produced by the slope of the rubble, causes the impinging waves to break, and if the mound is left at such a level that waves would break near the top, their full force would be hurled against the superstructure. The mound and its wave-breakers should therefore be carried up to high water level, so that the force of the waves will expend itself before it reaches the vertical wall; or else left well below low-water level. The author discusses at length the kinds of materials suitable for harbour work.

The chief requirements for the varieties of timber it is best to adopt under varying conditions are, capability of withstanding the action of the *teredo* and other wood borers, and suitability for driving as piles. Baltic pine, if creosoted after being finally shaped, is often capable of resisting these destroyers, but greenheart holds the best reputation in this respect, although its immunity from attack appears to depend to a great extent on the presence of other timber more congenial to their tastes. Greenheart, however, has a tendency to split in driving, but, if the system of placing the piles by means of a small jet of water, issuing at high pressure, at the lower end of the pile, be adopted, the mere weight of the monkey, without even sharpening the pile, is sufficient to sink it into sand, and when the jet ceases the pile is held as firmly as when driven.

Suitable stone is that having a high specific gravity and no tendency to crumble away when alternately wet and dry. Some granites, syenites, and quartzites possess these properties in a notable degree. The author discusses at length the methods adopted for quarrying such stone in the large quantities required for this class of work. He also considers the various strengths of concrete required according to the several systems of deposition, but it would appear unnecessary, in a work of this class, to enter into, as the author does, the method of manufacture of Portland cement—a material common to all kinds of engineering building.

Altogether, the book is one which may be perused with interest by the general reader and with profit by the student.

EXCAVATIONS BY THE BRITISH SCHOOL AT ATHENS.

A BRIEF notice of the excavations of the British school at the conjectural site of "Kynosarges" has already appeared in the *Times*. We are in a position to offer our readers some further details of discoveries which may, we hope, turn out to be topographically important. The director is in search of the "Gymnasium," which formed part of the sanctuary of Herakles at Kynosarges. Pausanias, it will be remembered, makes brief mention of the sanctuary (I. 19. 3), which he visited immediately after the district of the "Gardens," and on his way to the Lykeion. As neither of these sites are at present fixed, the discovery of the Gymnasium might lead to further identification. From other authors we learn that the Gymnasium was set apart for young men of illegitimate (*i.e.*, at Athens half foreign) birth; it was also used as a philosophic school, and here the Cynic, Antisthenes, taught. It must have been a precinct of considerable size, as the Athenians, after leaving Marathon, encamped within it. The road that approached it was, like that of the Academy, a street of tombs, and there stood the great monument to Isocrates, surmounted by a siren. The excavators have now cleared out the platform on which (not far from the Stadium) they hoped to find the gymnasium. They have come on upwards of eighty tombs, and in the central portion there is a network of ancient walls. Of these the uppermost structure belongs to a very late period, and includes a series of rooms with stucco walls and tiled floors and a large oven, or kiln. Below this structure the ground plan of a large building is traceable; it encloses a space of about 100 ft. square with apparently remains of a roadway and water-pipes outside it. Of these water-pipes one is probably of a date before the third century B.C., as it is interrupted by a grave of that period. The tombs found *within* this building have invariably remains belonging to the Geometric period (*i.e.* before 700 B.C.), or later than the third century B.C. This suits the proposed identification with the gymnasium; but, unfortunately, no decisive inscription has yet come to light. Of isolated finds in and about the tombs the most important are three fragments of a very fine stele of the early fourth century B.C., and a large series of fragments of an early Attic amphora; these last fragments were found built into a Byzantine wall. Mr. Smith conjectures that the walls of the uppermost stratum formed part of a Byzantine monastery, and a portion of the monastery seal, in itself an interesting object, has been discovered. A little to the left of the plateau an important water-conduit has come to light; it seems to have formed part of the great water system of Hadrian. Mr. Clarke, the architect of the school, is engaged in drawing up a plan of the whole site. The energetic director himself, ably seconded by Mr. Carr Bosanquet, a student of the school, is doing his best to be in two places at once; he alternates between "Kynosarges" and the island of Melos. Of the excavations there we hope to give some account in another issue.

NOTES.

The Water Board Bill.

IT is satisfactory to note that the Water Board Bill has now passed through Committee in the House of Lords. It is earnestly to be hoped that the Government will press it through the House of Commons at once. To the inhabitants of London it is of vital consequence; and it is quite equal in importance to a measure like the Agricultural Ratings Bill, which will only benefit a limited number of persons who happen to be engaged in agricultural pursuits. In the Committee in the Lords the Bill received a few small and unimportant amendments, and was reported to the House without any alteration in its principle. An attempt was made—without avail—to increase the representation of the City, and Lord James, of Hereford, stated that he had been asked to enlarge the representation of the county of Surrey. In the House of Commons it is much to be hoped that an amendment will be carried to prevent the Conservators of the Thames and the Lea being represented at all, as then there will be room for another representative from the City and from Surrey. As we have previously pointed out, there is no reason at all for there being representatives of the Thames and Lea on the Water Board, and we regret that the necessary amendment was not made in the House of Lords excluding them from the proposed new body.

The Dispute in the Building Trades.

THERE seems reason to hope that the dispute between the London builders and the Trades may be amicably settled, and that the further extension of the strike may be averted. There has been a misunderstanding (or misrepresentation) in some quarters as to the real point at issue. It is not a question of a slight rise in wages; that the employers are apparently quite ready to concede; it is the question of the right of the Trade Unions to demand the dismissal of non-union workmen, a procedure which is at absolute variance with the rights both of employers and employed, and cannot possibly be sustained in the long run; the force of public opinion must be against it. The Operative Bricklayers' Society have agreed to a rule to the effect that—

"If application be made to any employer by the

Committee [of the Society] to discharge any workman on the ground that such workman is obnoxious, and the employer refuses to accede, no strike shall be sanctioned, but the question shall be referred to the decision of the Board of Conciliation. Provided always that no such application shall be made in consequence of such workman belonging to or not belonging to any Trade Society."

That is a reasonable settlement of the question, which applies in both directions, and has in substance been agreed to also by the Plumbers' and Smiths' representatives. The Association of Master-Builders are now awaiting the reply, on this point, of the Amalgamated Society of Carpenters and Joiners, which may be known this week. It is to be hoped that they will see that it is in their own best interests not to refuse so reasonable a proposal.

The Accident at the Paris Opera House.

THE fatal accident at the Paris Opera House on Wednesday night, when apparently some weights gave way and crashed through an upper tier, should call for an early investigation into the state of the building and its fittings generally. We were only last week informed that both in structural and decorative repair there was much to complain of in the Paris Opera House, and although particulars of this accident are not yet to hand, it seems to bear out the information received. As far as the various fittings are concerned, those at the "back of the house" and those connected with the "central lustre" should be looked to, and speaking of this lustre it would perhaps be well to add that the approach to its gear should be more guarded. We have every reason to believe that there was an attempt made during the time of the last bomb outrages to cut down the lustre during a performance, which, however, fortunately failed. The accident was remarkable, among theatre accidents, for the absence of panic and the rapid attendance of the fire brigade.

Sheffield Water Supply.

AFTER considerable discussion, the preamble of the Sheffield Corporation Water Bill has been declared to be proved by the Committee of the House of Commons. It will be remembered that Barnsley sought power to utilise the watershed of the Little Don river, whilst Sheffield claimed the watershed as properly belonging to the population in the valley of the Don, and entered into agreement with Rotherham and Doncaster to supply those boroughs with water. The Sheffield Corporation also offered Barnsley one and a half million gallons per day if the latter Corporation would leave the construction of the necessary works in Sheffield hands. In consequence of the negotiations between the Committees of the two Corporations, terms have now been arranged whereby Barnsley obtains the right to construct a reservoir (Midhope) in the Little Don Valley of a similar size to their originally projected one, and relief of the obligation as between the two Corporations of giving compensation water from the Midhope reservoir as soon as the Langsett reservoir has been constructed by Sheffield. A compensation reservoir is also to be constructed by the latter Corporation. After dealing with the whole of the compensation, and giving Barnsley, Rotherham, and Doncaster their respective shares, Sheffield will in future command a supply of about 17½ millions of gallons per day, calculated upon the results of dry years. Assuming the population of the city in the year 1930 to amount to 683,000, that will give a supply of twenty-eight gallons per head per day. It seems to us that the Corporation has not looked far enough ahead; neither is the capitation supply sufficient on the estimate, in view of the increasing demands of sanitary science.

An Electrical Main on Fire.

ON Monday morning Northumberland-avenue presented a curious appearance. Thick smoke in vertical columns came out of five or six ventilating holes in the subway, and there was a strong smell of burning bitumen. The fire brigade were quickly summoned, and, after the electric current had been turned off at the various supply-stations, the fire was soon got under by pumping water down the manholes. It was found that one of the mains of the Metropolitan Company had fused and set fire to the casing round it. The main was drawn inside a Callender-Webber casing made of bitumen mixed with sand and wood fibre. It is stated that the fire was caused by the main being of insufficient capacity for the current. If this be true, then a fault must have been developing in the main since the heavy load of the preceding night. The fire proves that it is desirable to have incombustible casings for electric light mains in subways.

Supposed Dangers of Electricity.

MANY daily papers took advantage of this accident to point out the dangers of electricity. The *Daily News*, for example, pointed out that if there had been a leakage of gas in this well-ventilated subway there might have been an alarming explosion. Even the *Pall Mall Gazette*, which is generally very well informed in electrical matters, works up a sensational account, making out that the arrival of an electrician saved the lives of several firemen:—

"It was well he arrived before the firemen began to play, for you might just as well touch a free electric main with a copper rod as with so perfect a conductor as a continuous stream of water, and every fireman having hold of the hose that was playing on the fused cable would probably have received a sufficient discharge of electricity to have dropped dead in his tracks."

If there had been any single copper main carrying a current at extra high pressure (above 3,000 volts) we might have passed over this, but as the greatest pressure was 1,000 volts it would have been quite safe for the firemen. Water is a bad conductor; about forty-four million times worse than copper. We put a wire at 200 volts above earth, about 18 in. below a tap in a thick jet of water; touching the jet about a quarter of an inch from the wire with one hand and the water-pipe with the other hand, we managed to get a feeble shock, but nothing more. This shows that the supposed danger was imaginary.

Physical Experiment in Engineering.

THE "James Forrest" lecture which is annually given at the Institute of Civil Engineers was this year delivered by Dr. Alexander B. W. Kennedy, who chose for his subject "Physical Experiment in relation to Engineering." Although the lecturer commenced by complaining of the difficulties his subject presented, it soon became apparent that probably no one was so well qualified to deal with the problems which occurred as he was, since his long experience with experimental work enabled him to speak as an authority upon the various matters alluded to. The science of engineering depends upon the application of data found experimentally. Consequently everyone should be conversant with the result of at least the most important experiments relating more particularly to his own branch of the profession. In practice, however, the essential thing is to know what licence can safely be taken with the mass of figures which physicists have taken so much trouble to ascertain for us, and it is this knowledge which has made all our greatest engineers.

Water Supply in Cornwall.

FROM the monthly report for April of the Sanitary Committee of the Cornwall County Council, it appears that steps are being taken to improve the water supply to places some of which have probably long been very ill supplied in that respect, for in matters of sanitation there is reason to think that Cornwall has been up till recently one of the most backward counties in the kingdom in regard to sanitary progress. Under the active management of the County Council Committee, presided over by Mr. Trevail, reform seems to have set in. In their present report we learn that the St. Austell Urban Council have brought an excellent supply of water to that town, and that the Rural District Council are taking steps to do the same for Fowey. On the other hand it is noted in the report that Wadebridge and Padstow are without a proper water supply, and that as the latter town at present depends on shallow wells its supply is always open to suspicion in regard to pollution. It is to be hoped that the local authorities concerned with the sanitary condition of these places will act on the warning received with as little delay as possible.

A Piccadilly Mansion.

THE Piccadilly mansion of the late Sir Julian Goldsmid, M.P., with its extensive art collections (including some old musical instruments), will be offered for sale in the course of next month. The house was built 1850-1 for the then Marquess of Hertford, the materials being used of its predecessor on that site—the old Pulteney Hotel, which had been erected for the Earl of Barrymore, who died before its completion. The original façade was designed, it seems, by Novosielski, the re-building from the ground floor, and the porch, were done by Sir Robert Smirke. The Emperor of Russia stayed at the Pulteney Hotel during the visit to England in 1814 of the allied Sovereigns. The site had been that of Carter's statuary works, which stood next, west of the workshops of John Van Nost, maker of leaden figures, who came to England with William III., described in Baldwin's "New Complete Guide for 1754-5' as being "near to the Queen's Mead House in Hyde Park-road."

Donhead Hall, Wilts.

WITH regard to the proposed sale of Donhead Hall, near Shaftesbury, we notice that the auctioneers' advertisement states it "was built by Sir Godfrey Kneller, about 200 years ago." Formerly known as Belknap, it belonged to the Weekes family. In Sir R. C. Hoare's "Wiltshire" (vol. iv., 1829, fo.), we read that Mary, daughter and heir of

Luke Weekes, brought Belknap in marriage to Godfrey Kneller, Esquire, and that he built the house during the life-time of Mary, his first wife, who died in 1743, aged 38 years. Godfrey Kneller was son of a natural daughter, Agnes, of Sir Godfrey Kneller, by whose will he inherited a large property and assumed the name and arms of Kneller.

Fanciful Planning.

POSSIBLY few architects are aware of the existence, in the Art Library at South Kensington Museum, of a work by Johann David Steingruber, entitled "Architectonisches Alphabeth," which was published at Schwabach in 1773. Its title might lead one to expect a glossary of architectural terms; but this is not the case at all. There are about thirty plates, of fairly large size, representing plans of palaces in the shapes of the letters of the alphabet and of monograms of Royal personages. Immediately above each plan is the elevation of the design. They are very ugly, heavy façades, and variation in treatment is conspicuous only by its absence. The planning within a given shape is forced and unnatural, but some of the letter plans are decidedly ingenious, more especially the Q and the Z.

Exhibition of French Etchings.

THE "Société des Aquafortistes Français" has organised at the École des Beaux-Arts a very interesting exhibition of modern etchings, which is to remain open till the end of this month. It includes about 800 etchings, and illustrates for the first time the stages through which the process has slowly passed since the beginning of this century, and the difficulties experienced by the early etchers of the modern period, and by which even the genius of Ingres was seriously hampered. In the retrospective portion of the exhibition are to be seen examples of the work of Tony Johannot, Celestin Mauteuil, and Paul Huet, the curious experiments of Delacroix, a unique plate by Henriquel Dupont, proofs of plates by the painters of the so-called Barbizon school — Corot, Daubigny, and Millet — and lastly of Charles Jacques. There are to be seen also the remarkable etchings of old Paris by Méryon, animal subjects by Lançon, monkish subjects by Gustave Doré, and some very finely executed plates by Meissonier. Among contemporary artists represented Bracquemond is one of the most powerful, but he only exhibits reproductions of paintings by other artists, and is reserving his original work for an international etcher's exhibition which he intends to organise. After his, the finest works are those of M.M. Courtry, Lalauze, Lefort, Tissot, Detaille, Boilvin, Le Couteux, Gautier, Brunet, Desboutins, Toussaint, and others, and the splendid reproductions made by M. Laguillermie from pictures in the Windsor Castle collection. The catalogue, which is presented gratuitously, is prefaced by an interesting essay on the subject by M. Henri Béraldi, himself an etcher of great talent.

Irish Decorative Textile Work.

MRS. ERNEST HART has an exhibition of Irish linens and Irish needlework at her shop in Wigmore-street, which, though not nearly so large as other exhibitions we have seen there, has some interesting things for house decoration. The stencil designs, mostly Japanese, on coloured linens are very effective for portières, and so are some of the block-printed flannels, which have bold designs of blue and red on light-coloured ground. There are a few good Celtic designs worked by hand on linen, and there are also several effective counterpanes or curtains in darned work. We cannot agree with Mrs. Hart in thinking that the linens, however cleverly they may be woven, are good for dados and wall hangings. In London certainly, if not in other places, the less unnecessary hangings there are about the house the better. The linens in themselves are clean things, but the space between the stuff dado and the wall would become the happy resting-place for the ever-present germ. We admired some of the drawn linen work, and there are several very beautiful pieces of Irish crochet, which is a lace that fashion would do well to popularise.

Lord Leighton's House.

THE attempted sale of this house by auction resulted in a failure, the property being bought in at 12,000*l*. We presume this was for the house itself, not including the separate collections in it; but as the result seems to show that its market value has been over-estimated, perhaps it may still be possible to secure the house and its contents for the nation for a less sum than the 35,000*l*. originally talked of.

NOTES AT THE PARIS SALONS:

THE "NEW SALON."

IT will probably be the general opinion of English artists and art-critics who visit Paris this year that the two great annual exhibitions do not present a very high average of excellence or interest; and as far as we can ascertain this seems to be the opinion in Paris also. It is felt, as a French critic expressed it to us, that there is a kind of re-action going on now from the stimulus given to artistic production in Paris at the time of the 1889 Exhibition, and which had its effect for a year or two afterwards; at present there is a lull, the exceptional excitement has abated, and probably we must wait for the year of the 1900 Exhibition (if that event really comes off, which is actually questioned in some quarters) to see a revival of something like the same energy and vitality in art which was so impressive in 1889. The shortcoming is most perceptible at the "old" or Champs Elysées Salon, where the proportion of really interesting works, in comparison with the enormous number that are hung, is indeed smaller than we remember to have seen it for a good many years back.

The Champ de Mars Salon possesses what is unquestionably the great painting or series of paintings of the year, the five large decorative paintings by M. Puvis de Chavannes which are the latest things produced for that fortunate Public Library at Boston (U.S.A.), which ought to be, when completed, one of the most remarkable illustrations of the application of decorative painting to be found in the modern world. The paintings, which are on a great scale, fill five large upright rectangular panels, and represent respectively "Virgil (Pastoral Poetry)," "Æschylus and the Oceanides (Dramatic Poetry)," "Homer crowned by the Iliad and the Odyssey," "History calling up the Past," and "Astronomy (The Chaldæan Shepherds observing the movements of the Planets)." They are all painted in those low and cool tones from which this artist never departs, and which we have learned to associate with his name and his class of subject; and while one may sometimes feel that, as a question of decorative effect, a little more decided colour might be desired, it cannot be denied that this low and conventional scale of colour, which removes the paintings entirely from the region of reality, is precisely the best suited for these idealised designs, in which each figure represents not so much a man or a woman as a symbolised idea. Of the five, the three last-named are the finest (we give them in the order of the catalogue, which, with the usual carelessness of French hanging, is not the same as on the walls). The Iliad and the Odyssey are represented by two fully-draped noble-looking women of Greek type, in whose personalities the distinction between the two poems, the warlike and the peaceful poem, is beautifully indicated; these bring wreaths to Homer, who stands in the midst of a picturesque rocky landscape. In the Astronomy subject we are carried back to the early ages of the world, two or three figures look up and one points out to the others what has struck him in the movement of the planet, the primitive shepherd's hut occupies the left of the scene; the whole carries one back vividly in fancy to the time when everything in the phenomena of nature was a mystery and a wonder to the simple mind of unscientific man. In "History" we see the upper portion of an archaic Doric temple rising above the mounds which have gathered round it in the lapse of time, while the female figure representing "History" looks down into the cavern in which the temple has become submerged and beckons to evoke "The Past;" a nude youth carrying a torch, who follows her, represents no doubt the light which is to be thrown upon the past. This is an example of a symbolical meaning rendered in an exceedingly simple and at the same time pictorially effective manner. The presence of such a series of beautiful and thoughtful paintings on the walls of a Library for public study cannot but have an effect on the mental education of those who make use of the building. Why do not our State and municipal authorities make an effort to promote the same kind of noble embellishment of the walls of public buildings? It may be said that we have no Puvis de Chavannes (for we cannot consider Sir E. Burne-Jones to be his equal as an intellectual artist, though he is of course great as a colourist); but there is no chance for one if we had him, and perhaps one of the very reasons why France posseses such a great decorative painter is that there are such great opportunities given, for M. Puvis de Chavannes has made his reputation with great works on French wall-spaces long ago, and now America calls on him, while England looks on indifferently and "cares for none of these things."

How fine is the quality of these works may be estimated the better by comparing them with some highly respectable church decorative paintings of about the same scale hung on the opposite wall of the Great Hall at the Palais des Beaux-Arts, but which appear hopelessly commonplace after the Boston designs. The New Salon, however, possesses another great painting of a high order, and which indeed appears to excite much more attention among the visitors, viz., M. Dagnan-Bouveret's large religious painting "La Cène." The Last Supper. This is not a decorative painting, bnt a picture in the usual sense of the word. In the treatment of the subject the artist steers half-way between the ancient conventional treatment of sacred personages and the modern realistic treatment represented by such artists as Van Uhde. His disciples are a collection of men of vigorously characterised personality clad in garments which might be the everyday garb of working men, instead of in the sumptuous draperies of the Renaissance apostles; yet the painting has its supernatural element in the treatment of the figure of Christ, whose countenance and clothing follow pretty nearly the received and orthodox type in religious painting, and from whom the principal light in the picture radiates, as indicated by the shadows of the objects on the table. There is a little sense of trick about this which one would rather have been without, but as a whole this is a noble and powerful work, and worthy of the artistic reputation of this very serious painter, who has not before, as far as we remember, treated a sacred subject in a painting on a large scale.

For the rest, the New Salon contains a certain number of works of real interest, but presenting nothing very different from what we have been accustomed to find there in former years. M. Aublet again introduces us to a bevy of beautiful nude ladies, of the type of modern life but removed from realism by the subdued decorative scale of colour and the conventional treatment of the landscape, by the borders of a lake; in this case in cold light, for the title is "Le Soir," and the result is rather chilly; the warm light and sunshine suits M. Aublet better. M. Béraud has at last quitted his scenes of Christ in modern life, having felt, let us hope, that he had carried too far an idea which had a powerful effect for once, but would not bear repetition. He exhibits a head of Christ, indeed, in the more orthodox style of religious painting and of considerable beauty and pathos; but his leading work, "La Poussée," though it is not so

stated in the catalogue (where it has no title but the words just quoted), is obviously intended as a kind of translation of the catastrophe of "Don Juan" into modern life; there is an interior of a sumptuous modern dining-room and a banquet attended by ladies and gentlemen in evening dress, which is interrupted, not by a stone statue walking in, but by the eruption of a violent mob of the lowest order armed with knives and other weapons. Otherwise the analogy with the supper scene in Don Juan is complete; the majority of the company are making a hasty retreat, while the host, with a richly-dressed young woman clinging to him, holds out a champagne-glass to the mob with exactly the bravado of the Don in the operatic scene. The picture is admirably painted in all the details, and the story told with great vigour and effect. The same painter's three-quarter length, "Léona" (the works of each artist are all grouped together at the New Salon—an arrangement with many advantages), in reality a portrait, has a great deal of face and character. M. Binet seems to have been aiming at some similar mingling of old and new ideas in his curious picture entitled "Marie-Madeleine," the meaning of which we cannot pretend to understand. M. Carolus Duran has a considerable number of portraits in his usual style, not quite so striking as some that he has produced, but marked by the same splendid talent and apparently inexhaustible variety of colour effect derived from the materials of modern ladies' costume. As a dramatic contrast we may cite M. David-Nillet's "Aveu," a declaration of love between two peasants of the roughest order, in an interior of the humblest class; there is a considerable power both of style and of pathetic expression in this; in sentiment it is of the simple and direct school of Millet, though different enough in execution.

M. Gervex occupies the whole end wall of one of the galleries with his large "decorative landscape" for the Salle de Physique of the Sorbonne; a rather questionable kind of work. Can landscape be treated in a "decorative" manner, *i.e.*, kept comparatively flat and conventional, and still remain a landscape? This one is treated, no doubt, in a large and broad manner and with an absence of realistic detail; but for all that it remains a landscape in perspective, and as such is out of keeping with the idea of a flat wall, partly cut into by a door and its framework. M. Puvis de Chavannes has once or twice produced what may be called a decorative suggestion of landscape; but then these were treated in entirely conventional and unreal colour, and were only backgrounds to the figures which formed the chief element in the design, and emphasised the front plane of the picture. On the whole the experiment would lead one to recommend that attempts at "decorative landscape" should be abandoned; the thing is a contradiction in terms. Among the exhibitors of the New Salon who have made a special mark there, and have a special style of their own, M. La Touche keeps up fully the reputation he has already acquired for the production of a class of works which may be considered in some degree decorative, since they are conventional in idea, composition, and colour; they may be described as ideal scenes with figures in which the main object is to produce brilliant and glowing effects of colour. Of those which he exhibits this year the finest is "La Vasque," a composition bathed in glowing light and colour, in which the lofty vase or basin of a fountain occupies the central portion of the picture, with the water welling over its edges into a pool below, in which swans and nymphs swim around the fountain: the result is a fine combination of movement and colour. The same artist has also applied his peculiar gamut of colour to a fine portrait group—father, mother, and infant, in which the mother is clad in a brilliant orange-coloured costume and holds an infant clad in pure white on her knee; the effect of the combination is very striking, and is well set off by the rich but deeper and mingled colouring of the foliage which forms the background. Altogether M. La Touche is an artist of great originality, whose work grows upon one as it is studied. Mdme. Lee-Robbins (an American artist turned French) makes a powerful but very ugly study of a "Femme Nue" at a window and seen under peculiar conditions of light; an ugly realistic picture which may be contrasted with M. Bouillon's very fine and classic (in the best sense) three-quarter length figure entitled simply "Nudité;" an abstract treatment of the figure which is refreshing after some of the realistic studies to be seen here and there. M. Fourié's "Baigneuse," a *plein-air* study in light colour, is however a fine thing, and M. Ménard's "Crépuscule," nude figures in twilight by the margin of lake; a purely poetical work of great refinement of feeling and colour. M. Picard exhibits strong originality of subject and colouring in his "Conversation le soir au bord de la mer," a work of very peculiar and powerful colour effect, in which a man, with his face in shadow, is conversing with a woman whose face is in a full glow of artificial light; he exhibits one or two other works of a similar *motif*, and is certainly original if rather eccentric. M. Simon makes, like M. Gervex, a mistake as to the boundaries of proper decorative painting in his "La Peinture — Panneau decoratif," which is simply a domestic interior in real life, an artist and his family, painted in a half-conventional fashion, and a very ugly composition. The first business of decorative painting is to be beautiful in line and composition.

Among miscellaneous works which impress one by a certain special power of one kind or another are M. Cornillac's powerful portrait of Mdlle. Jeanne Bourgauld in a crimson dress, playing a violin; M. Martens' "Dans les Dunes," a bare landscape with a woman and goat in the foreground, which is a real picture in the true artistic sense; M. Montzaigle's "Entr'acte," a satirical study of the figures standing about in the stalls of a theatre between the acts; and M. Perret's "Noël des Vieux," a pathetic painting of two aged people—a French version of "John Anderson my Jo." There are a good many very pleasing small landscapes, of a type more English than French, which find their most suitable place in the New Salon; in the old one they would be utterly crushed; and one large landscape of a higher order, M. Courtens' "Matinée sous bois," a noble painting of a scene in a great forest with the sunlight struggling through the heavy masses of foliage; and there is one first-rate though not large sea piece by Mr. Douglas Robinson, "En pleine mer," to whose name one would not be surprised to see attached the note "né à [Londres," even if we did not know the fact; no Frenchman ever painted sea like that.

Sculpture is never the primary interest of the New Salon, though now and then there is a great work to be seen there; this year there are only two works that need be mentioned; M. Injalbert's monument to Molière, intended for the town of Pézénas, and M. Marquet de Vasselot's model of a proposed monument to Balzac. The former is a big piece of sculpture of the robust order, representing Molière in the dress of his time, a woman (perhaps the celebrated "housekeeper" who criticised his plays) as if in conversation with him on one side, a satyr seated at the other side—not a suitable symbol of Molière's wholesome and cleanly wit. M. de Vasselot has had the odd idea of representing Balzac as a Sphinx with a human head; the most interesting part of the work, which is yet in a very sketchy state, is in the two bas-relief panels in which the principal characters of the "Comédie Humaine" are to be represented; some of them are very recognisable, others not yet sufficiently made out; but the idea is an admirable one. In a gallery at the side of the Sculpture Court are exhibited a whole series of stained-glass windows for Orleans Cathedral, by M. Galland (in collaboration with M. Gibelin), placed in the partition separating the Sculpture Court from the one of the grand floor corridors, so that they can be seen from the corridor, which is lighted only through them. As to the windows themselves, they are very able compositions crowded with figures, though we cannot care much for their colour effect, which is crude and the texture of the glass smooth and wanting in depth and richness of surface; but the point is that stained glass is recognised and exhibited in its proper form, as a special branch of art, as the Royal Academy ought to arrange to exhibit it, instead of hanging small water-colour drawings of stained glass, which are utterly futile as a means of judging of the design.

ROYAL INSTITUTE OF BRITISH ARCHITECTS:

BARODA PALACE.

THE twelfth ordinary meeting of the Institute took place on Monday last, at 9, Conduit-street, Mr. Alexander Graham (Vice-President) in the chair.

The Chairman announced that a number of gentlemen were candidates for the Fellowship of the Institute, and, in accordance with custom, the names would have appeared on the walls that evening as admitted to the candidature. The Council, however, were of opinion that, as a Special Committee had been appointed to consider the whole question relating to the candidature and election of Fellows, it was desirable to defer the names approved by the Council until the Committee had made their report. The Council had every reason to believe that the report would be ready before the business meeting to be held on June 8.

Mr. R. F. Chisholm (Fellow) then read a paper entitled "Baroda Palace: The Town Residence of H.H. Sir Syaji Rao, G.C.S.I., Maharajah Sahib Gaekwar," of which the following is a summary:—

In his opening remarks the author observed that, as probably the most costly structure erected by a private individual during the present century, a description of Baroda Palace might fitly find a place in the annals of the Institute. The building was designed and actually commenced by the late Major Mant. At the time of his death the general drawings to a scale of 8 ft. to the inch were completed; the half-inch scale enlargements for the entire lower story; also a considerable number of full-size working drawings of ornament. In actual work the foundations were laid, and the superstructure raised some 6 ft. or 7 ft. above the top of the plinth. At this stage the author was commissioned by the Gaekwar to carry the work forward to completion, as far as possible according to the original designs. The building measures about 500 ft. in length by 150 ft. in breadth, and covers an area of some 60,000 superficial feet. The total cost, including mosaic work and decorations, amounted to about 180,000*l*. The palace stands by itself in an open park, and consists of three groups of apartments:—The public rooms with their courtyard approached by a porch on the north side, the Maharaja's rooms with their two courtyards approached by a porch on the west side, and the ladies' apartments with their courtyard approached by a porch on the south-west. The materials employed are brick with sandstone facing throughout; the greater number of the columns are of marble. Red sandstone from Agra and blue trap from Poona are largely used for varying the colours of the surface. The floors are made fireproof throughout by iron joists and girders carrying arches on the lower flanges, and filled in with concrete.

The author then described the building under the following heads: (1) The Plan; (2) The Exterior; (3) The Interior. The old palaces of India contain certain well-marked features: First, the entrance gateway surmounted by the nowbut rhana, or drum-house. This leads to an open courtyard, around which are grouped the Raja's public offices; and at the palace side the Durbar Hall, sometimes open, as at Agra, or sometimes with its separate courtyard, as at Ambur; beyond this a courtyard, around which are situate the Raja's private apartments, and beyond these again, an inner courtyard surrounded by the ladies' apartments. Major Mant had embodied these features in his plan, and arranged them in the same way, but with an eye to an architectural elevation. Two lessons were to be learnt from the building as constructed. First, it was an error to have made the major axis of the palace lie north and south, in place of parallel with the sun's path east and west; secondly, having so placed the axis, deep verandahs should have run along the west face. These points having been discussed at some length by the author, he next dealt with the exterior, and showed by the aid of drawings how the general appearance of the building had been affected by the alterations made on the original design. Modifications had been made in the roof of the durbar hall, which, instead of being pitched, as first intended, had been made flat. Unity was thereby preserved, and the flat roof served the purpose of a dancing-terrace. The main tower was remodelled, and the principal dome altered, for reasons duly set forth. The style of the building is the latest period of what Fergusson called Hindoo Saracenic, standing about midway between the old red sandstone work at Agra and the later marble-work which succeeded it, when the ornamentation bore the distinct impress of European hands. From an architectural point of view, the exterior was a distinct advance on most modern Indian buildings, as a successful attempt to combine native details with the ordinary requirements of a modern palace and arrangement of rooms. Leaving the main subject, the author next considered the specific treatment to be adopted in modern Indian buildings in order to block out the sun's rays. Neither trabeated nor arcaded verandahs exactly

answer the requirements, both having to be considerably modified by blinds or woodwork. In many public buildings the inmates suffer, the Government authorities discountenancing any defacement of handsome facades. Referring to the old native styles and their adoption in modern buildings, the author eulogised Colonel Jacob's work at Jeypore, and testified to the invaluable services he had rendered to Indian architects by the publication of the series of details of Indian architecture. Having further discussed the defects and beauties of the late Hindoo Saracenic style, the author gave a minute description of the interior of the Palace, the whole of the details of which were worked out entirely by himself. The Durbar Hall is about 92 ft. long by 54 ft. wide, and 48 ft. high to the underside of the ceiling. The floor is of Venetian mosaics, and was put down by twelve Italian workmen, who spent about eighteen months in Baroda. The dado is of Carrara marble, inlaid with Venetian mosaics. All the spandrels of the openings are filled in with Venetian mosaics on a gold ground, and four recesses have groups of statuary representing painting, poetry, sculpture, and architecture, executed by the Italian sculptor Signor Felici. The ladies' gallery is of elaborately carved teak-wood, filled in with the beautiful Deoder tracery from Pinjra. The walls are coated with fine Madras chunam. The main staircase is of Carrara marble, of an Oriental pattern, and decorated with gold lines picked out with fine lines of vermilion on either side, after the manner of the Delhi interiors. In both the above-mentioned apartments the ornament is flat, and all variety is obtained by colour and gilding. So far as he was able the author regulated every tint applied to the walls, and painted pieces of all ornament. It was the Gaekwar's desire that his architect should design the furniture and fittings of the palace in keeping with the general style of the building, and so to spend the money among the natives and improve their arts. A large stock of timber was purchased for this purpose, but it was found that the time required was too great, and the furniture was supplied by eminent firms in London, Paris, Calcutta, Bombay, and Madras. The grounds and parks surrounding this and other palaces of the Gaekwar have been laid out by Mr. Goldring, of Kew.

The paper was illustrated by a collection of plaster casts, and a large number of drawings, paintings, photographs, and etchings.

Mr. R. Phené Spiers, in proposing a vote of thanks to Mr. Chisholm, said that he (the speaker) read a paper fifteen years ago giving an account of Major Mant's works, and describing his career. Major Mant was a Fellow of the Institute, and the first engineer who occupied that position. Many years ago, when Major Mant was preparing drawings for this building, general plans were put in hand, and brought over here to be carried out and completed. Unfortunately, through some cause, the Major fell into bad health, and, during the close of his life, he (Mr. Spiers) was engaged with him a good deal in going through his plans, and trying to assure him that certain of the risks he contemplated in the carrying out of the building were only illusory. He suggested that the Major should engage the services of a competent surveyor to calculate the exact weights, and they arrived at a variety of conclusions. The last communication which came from India proved that, before leaving that country, he made all necessary calculations, and that in certain cases where they were defective he had provided extra foundations, so that his fears were purely imaginary. Doubtless in the Central Tower better foundations might be required, and the way the question had been met by Mr. Chisholm, and the manner in which the design had been changed, was an improvement on the original plan. Nothing had given him more pleasure than to hear that this magnificent work had been carried out, and, as far as the exterior was concerned, in all its entirety, while Mr. Chisholm, like the true artist, had recognised what was valuable in Major Mant's work, and had done his best to maintain it, at the same time giving Major Mant the fullest credit for it. As to the orientation of the building, when he had to do with the calculations he did not know in which way the building was to face, but as it now stood, the absence of verandahs must be a great disadvantage. This led him to the point of the great difficulty Indian architects had in providing these verandahs. For many years the Government had sent over engineers to the Public Works Department in India, and he had had the privilege of educating them. His desire as far as possible had been to give these engineers first a general training, and to lead them gradually up to study the style of their own country. He had, therefore, during the last months of their sojourn, endeavoured to see how far he could instil into them the proper principles to be observed in working out buildings in that style, and the great difficulty he had experienced was in knowing how to advise them to deal with verandahs. Mr. Chisholm had explained the great difficulty there was if the verandahs were carried up the whole height of a building. It gave a fragile appearance, and if the verandahs were set back in terraces the effect was somewhat like that of the Pyramids of Egypt. The only thing he could suggest was that there should be some connection as between the verandah and the building at the back, and that if possible the upper portion of the structure should rise above the verandah, thus showing that there must be a solid wall behind. There was one point of great interest on which he would like Mr. Chisholm to give more detail, viz., how he constructed the central dome without centering. The question was one which had of late frequently occupied the attention of the Institute, and Professor Aitchison had read papers, in which he had pointed out the peculiar value of the researches made by M. Choisy. It was a point worthy of the attention of the members, and it would be of great interest if Mr. Chisholm would tell them the plan he adopted in building the great dome without centring, and what was the current way of building domical structures in India. In looking through Major Mant's sketches, he was much struck with the extraordinary beauty of some of the details. With regard to the origin of some of the ornament, there was no doubt that the influence of Byzantine work had travelled there, and supplied some of the ideas for it. He had much pleasure in proposing a vote of thanks to Mr. Chisholm for his extremely clear and lucid paper, and for the valuable plans and specimens of carved work he had brought to illustrate it.

General H. St. Clair Wilkins, R.E., in seconding the resolution, said he had never met Mr. Chisholm before, but had often admired his designs in India. With Major Mant he had been well acquainted. On one occasion the Major showed him the plans of the building for about five minutes, and asked him then to criticise them. He, however, replied that it was rather a large subject, and the only thing he could remark was that the tower was not calculated to stand. Mr. Chisholm appeared to have completed the palace in a very satisfactory way. He could not imagine a better position for an architect to be in than to have another man's plans, which could be altered, and with a large treasury behind him. He understood that the palace was built of stone. The native buildings in the Hindoo-Saracenic style were generally of stone, but in those days there were no estimates, and they were enabled to gratify themselves by producing the most wonderful structures to be seen in any part of the world. This building must have been expensive on account of the immense amount of ornament distributed through it. Mr. Chisholm appeared to have done very well indeed in the alterations he had made, and he had certainly done full justice to Major Mant. The Hindoo-Saracenic style was one very difficult for architects of the present day to indulge in on account of the enormous expense. The natives frequently constructed their buildings with a stucco face. He did not know how Mr. Chisholm constructed his dome, but he was well acquainted with domes in India, and particularly with the large dome in the City of Bejapur, a dome of such construction as was not to be met with elsewhere. The dome covered an area of about 19,000 square feet, and it had no immediate supports, owing to its ingenious construction. There were no buttresses outside; the dome was nearly semicircular; it was 10 ft. thick, built of brick, and the weight was all hung inside. [The speaker then explained the construction on the black-board.] He added that the dome was built about 250 years ago, and he believed it was really built on solid centrings. To repair this dome, for it needed repairing now, would be a very difficult undertaking indeed. The dome had great cracks in it, which appeared all round like the pips of an orange, but it was still sound in other respects. Major Mant designed a large building at Cawnpore, the expense of which was enormous.

Mr. Sills said he was well acquainted with Major Mant in India, both privately and officially, and he was very pleased he ha heard the paper read that evening by Mr. Chisholm. The verandah was a great difficulty in connexion with all the public buildings he had had to do with in India. He had a good deal of experience in connexion with painting, and he had found that the ordinary Indian painter used a kind of glove or rag, which he preferred to a brush.

Professor Aitchison believed that the chances were a hundred to one in favour of the Indian painter, who laid on his colour with a rag, producing a much better effect than our painters would with a brush as it would have variety of tone instead of being flat. It would be found that every kind of jewellery and woven work done by the natives for the natives was generally excellent in form and in colour. He had noticed that the buckles, clasps, and such work, done for the common people, were usually very fine, while when they were made for the English market they were of the most inartistic description. By contact with Europeans the most crude colours were substituted for the lovely shades of colour formerly used. He had heard from travellers in Persia that many of the domes there were built on mounds of earth according to the rule of thumb. M. Choisy in his book on "The Art of Building among the Byzantines," showed how centering had been abandoned, and how their vaults and domes had been constructed without any. It was necessary to go to India, Burma, or Siam, to learn a living style of architecture, and the most brilliant of our architects were immediately captivated by the living style they found there, and adopted it.

Mr. Thomas Blashill said that in looking at such modern work as he had seen, it had always struck him that a building in which the arch was introduced to a larger extent than it used to be in Indian work, seemed to lose the agreeable character possessed by the old Indian architecture. With regard to the verandah, was it not possible that more could be made of it than as a temporary expedient? The sketch Mr. Chisholm had put on the blackboard appeared to contain the germ of the proper order of constructing such buildings. He was always interested in seeing Indian wood-work. It might be liable to the attacks of insects, and also to the ravages of fire, but the wood-work of India was perhaps even more interesting than anything else, unless it were the stone work in which ornament of a similar character was used. It seemed a great pity that that class of design and construction was not more studied in this country, and any one who wished to see real Indian construction should go to the Indian Museum at South Kensington and inspect the ceilings there. He had never seen anything like these wooden ceilings, and something of the same kind could be seen in the Indian wood-work at the Earl's Court Exhibition.

Professor Aitchison added that it was possible the idea of the Durbar halls was taken from the throne rooms of the Roman imperial palaces. Referring again to the verandahs, there was one place where these were lavishly used internally, viz., at the Alhambra. Although the hot season there was not comparable to that of India, it was still extremely sultry, and almost all round the Courts of the Alhambra were to be seen cloisters formed of slender marble columns and thin arches on which were fixed a lattice-work of tiles, the plaster on which was carved into arabesque. The object there evidently was to get a through current of air.

The Chairman assured Mr. Chisholm that the sympathies of the Institute went out to every architecture under the sun—not only that which had been, but that which they hoped British ingenuity might produce in future years. Mr. Chisholm had shown what he could do, but very few of them were sufficiently fortunate to have clients who had palaces to build. At the same time, they were creatures of imagination, who lived in thought in marble palaces. One point, which had been referred to more than once, was as to the adaptation of verandahs to domestic purposes. They knew that the verandah was largely used in all Eastern countries, and he could not help thinking it was not used to the extent it might be in this country. No doubt our climate was a variable one; but there were a great many months in which they could enjoy what might be called a semi-out-of-door life. If, then, architects would pay more attention to the use of the verandah—not verandahs three or four feet wide, but of larger width—they could be utilised for ordinary purposes. A verandah such as he referred to was virtually a room—adding another apartment to a house at a small expense. Allusion had been made to Colonel Jacob and Mr. Harris. The works of these gentlemen were familiar to them, especially the works of Colonel Jacob, and

the excellent text-books published under his superintendence.

The vote of thanks was then put to the meeting, and carried by acclamation.

Mr. Chisholm, in replying, said that in some cases where the wall rose above the verandahs, they appeared like a cage dropped down, but if they could bring solidity above the lightness it would meet the case better. He then explained on the blackboard the manner in which he had designed domes. He had adopted Wren's principle as carried out in St. Paul's. Wren saw that if he could tie the dome in at the foot he could get a stable construction. He therefore constructed the cone and tied it at the foot, resting the dome on that. The dome was supported by a series of chambers between the cone of brickwork and the dome outside, and that seemed to be the true way of treating a dome. In the dome he had constructed at the College of Baroda, he built not exactly a cone, but turned the dome outside. On the plan there were sixteen cross walls all round between the two. The dome was constructed by two courses of stone, breaking bond, dowelled, and cramped together. The dome was 75 ft. across, and was built ring by ring in a serpentine form. With stone it was a much simpler form to deal with, because each course was cramped, and each was complete in itself, the rings working to a smaller eye until the dome was closed. As to foundations, it was not safe to put any greater pressure than a ton and a quarter on alluvial earth; in fact, it was better never to have more than one ton per superficial foot on the actual earth. They had to consider, not only what occurred on the surface of the ground, but that the changes caused by dry and wet seasons were likely to affect a building. Teak wood was never attacked by insects. As to ornament, there were one or two parent forms, and these gave every variety of form.

The proceedings then terminated.

CONFERENCE OF ARCHITECTS AT MANCHESTER.

A CONFERENCE of Architects took place in the City Art Gallery, Manchester, on Wednesday, when Mr. Alex. Graham, Vice-President of the Institute of Architects, occupied the chair, in the absence of the President, Mr. F. C. Penrose, who presided at the first annual dinner which was held subsequently.

The proceedings were opened at three o'clock, when Mr. E. Salomons read a paper on professional topics. He said that when the Institute took the wise resolution to hold their dinner in Manchester this year, it was thought by the executive that a few words should be said touching the mutual relations between the local affiliated societies and the parent institution. While he believed there must be complete agreement amongst them as to the good which relationship between the metropolitan and provincial societies tended to produce, there might be differences of opinion, less or greater, as to the methods by which this relationship could best be improved and developed for the general welfare of the profession. One of the most important benefits resulting from the relationship was doubtless the direct consequence of closer and more frequent personal intercourse between the provincial societies and the Royal Institute of British Architects, whereby the provincials got their views enlarged by the experience of those at the head of the profession, and thus improved the standard of their (the provincial architects) own work, even if it was not excusable to hope that, on the other hand, the members of the Institute might occasionally be able to gather some information from their provincial brethren. A great deal was to be gained by social intercourse only, and such a gathering as that at which they were assisting was a very important one from that point of view. It tended to do away with those petty jealousies which surrounded all professions, more particularly their own, that being one in which personal contact did not often occur as it did in the case of the legal profession and in fact nearly all others. A busy architect might be occupied all day at work without meeting for years any of his professional brethren. Such was the speaker's own case. When he commenced practice in 1852, the Manchester Society did not exist, and for years he only knew personally one or two architects whom he chanced to meet in society. There was no opportunity for that exchange of views and experiences with others which would have been to them a mutual benefit. Whatever they did had to be done with such knowledge as each individual possessed—no classes for study, no papers read that might enlarge their ideas or instruct them; in fact, each individual architect had to work entirely on his own resources. The only means they had of knowing what was going on in the architectural world was through the means of the *Builder*, the only architectural paper published in his early days of pupilage and practice, and he felt grateful to it for much that it had taught him of what was going on outside his own small provincial circle. If, then, their profession had gained so much by the founding of one local society, so much more in proportion was to be gained by the uniting of all England into one concrete body under the central control of the Institute—not the autocratic control of an imperial government, but the constitutional sway of a republic extending its branches to all over Great Britain and Ireland, and why not also to our Colonies? With a bond thus uniting all English-speaking architects (for, remember, Americans called the English language American) much might be done, and one of the first things to occupy the attention of the whole body should be the revision of the present miserable system of competition, by which the public obtained the work of an architect for practically nothing. He might give them an illustration of this in a case (only one of hundreds of similar ones) which took place recently in Manchester, when some fifty sets of drawings were sent in, and the average cost of these at a very low figure must have been 10*l.* each. The cost of the building would be about 7,000*l.*; thus to obtain a commission of 350*l.* the profession spent 500*l.*, to say nothing of the cost of preparing working drawings. Surely for this great evil some remedy might be devised. 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Mr. John Holden, President of the Manchester Society of Architects, said that the Institute naturally took the first place amongst architects; it should therefore attach to itself the provincial societies throughout the country. That it did to a certain extent; and it seemed to him that it was for the different provincial societies to act as feeders. They should form connexion with the large number of outsiders—people who could not, or would not, join the Institute. It was asked, "What benefit shall I get by becoming a Fellow and by paying four guineas a year?" And really there was a great deal to be said for that view. Then provincial architects obtained, through their local societies, many of the advantages which the Institute had to offer. But that was rather a narrow view to take, and there was something beyond mere L. s. d. to consider, and he certainly thought that one of the objects, one of the principal duties, of a local society was to act as a "feeder" to the Institute. It should be the endeavour of all architects to join the parent society, and if they could only induce every architect in the country to join the Institute, of course there would be a solution of difficulties at once. But that was not possible. Many would not join, and many would not be eligible. One of the things which every provincial society ought to do was to render it impossible for their Society to drop out of representation on the Council

answer the requirements, both having to be considerably modified by blinds or woodwork. In many public buildings the inmates suffer, the Government authorities discountenancing any defacement of handsome facades. Referring to the old native styles and their adoption in modern buildings, the author eulogised Colonel Jacob's work at Jeypore, and testified to the invaluable services he had rendered to Indian architects by the publication of the series of details of Indian architecture. Having further discussed the defects and beauties of the late Hindoo Saracenic style, the author gave a minute description of the interior of the Palace, the whole of the details of which were worked out entirely by himself. The Durbar Hall is about 92 ft. long by 54 ft. wide, and 48 ft. high to the underside of the ceiling. The floor is of Venetian mosaics, and was put down by twelve Italian workmen, who spent about eighteen months in Baroda. The dado is of Carrara marble, inlaid with Venetian mosaics. All the spandrels of the openings are filled in with Venetian mosaics on a gold ground, and four recesses have groups of statuary representing painting, poetry, sculpture, and architecture, executed by the Italian sculptor Signor Felici. The ladies' gallery is of elaborately carved teak-wood, filled in with the beautiful Deoder tracery from Pinjra. The walls are coated with fine Madras chunam. The main staircase is of Carrara marble, of an Oriental pattern, and decorated with gold lines picked out with fine lines of vermilion on either side, after the manner of the Delhi interiors. In both the above-mentioned apartments the ornament is flat, and all variety is obtained by colour and gilding. So far as he was able the author regulated every tint applied to the walls, and painted pieces of all ornament. It was the Gaekwar's desire that his architect should design the furniture and fittings of the palace in keeping with the general style of the building, and so to spend the money among the natives and improve their arts. A large stock of timber was purchased for this purpose, but it was found that the time required was too great, and the furniture was supplied by eminent firms in London, Paris, Calcutta, Bombay, and Madras. The grounds and parks surrounding this and other palaces of the Gaekwar have been laid out by Mr. Goldring, of Kew.

The paper was illustrated by a collection of plaster casts, and a large number of drawings, paintings, photographs, and etchings.

Mr. R. Phené Spiers, in proposing a vote of thanks to Mr. Chisholm, said that he (the speaker) read a paper fifteen years ago giving an account of Major Mant's works, and describing his career. Major Mant was a Fellow of the Institute, and the first engineer who occupied that position. Many years ago, when Major Mant was preparing drawings for this building, general plans were put in hand, and brought over here to be carried out and completed. Unfortunately, through some cause, the Major fell into bad health, and, during the close of his life, he (Mr. Spiers) was engaged with him a good deal in going through his plans, and trying to assure him that certain of the risks he contemplated in the carrying out of the building were only illusory. He suggested that the Major should engage the services of a competent surveyor to calculate the exact weights, and they arrived at a variety of conclusions. The last communication which came from India proved that, before leaving that country, he made all necessary calculations, and that in certain cases where they were defective he had provided extra foundations, so that his fears were purely imaginary. Doubtless in the Central Tower better foundations might be required, and the way the question had been met by Mr. Chisholm, and the manner in which the design had been changed, was an improvement on the original plan. Nothing had given him more pleasure than to hear that this magnificent work had been carried out, and, as far as the exterior was concerned, in all its entirety, while Mr. Chisholm, like the true artist, had recognised what was valuable in Major Mant's work, and had done his best to maintain it, at the same time giving Major Mant the fullest credit for it. As to the orientation of the building, when he had to do with the calculations he did not know in which way the building was to face, but as it now stood, the absence of verandahs must be a great disadvantage. This led him to the point of the great difficulty Indian architects had in providing these verandahs. For many years the Government had sent over engineers to the Public Works Department in India, and he had had the privilege of educating them. His desire as far as possible had been to give these engineers first a general training, and to lead them gradually up to study the style of their own country. He had, therefore, during the last months of their sojourn, endeavoured to see how far he could instil into them the proper principles to be observed in working out buildings in that style, and the great difficulty he had experienced was in knowing how to advise them to deal with verandahs. Mr. Chisholm had explained the great difficulty there was if the verandahs were carried up the whole height of a building. It gave a fragile appearance, and if the verandahs were set back in terraces the effect was somewhat like that of the Pyramids of Egypt. The only thing he could suggest was that there should be some connection as between the verandah and the building at the back, and that if possible the upper portion of the structure should rise above the verandah, thus showing that there must be a solid wall behind. There was one point of great interest on which he would like Mr. Chisholm to give more detail, viz., how he constructed the central dome without centering. The question was one which had of late frequently occupied the attention of the Institute, and Professor Aitchison had read papers, in which he had pointed out the peculiar value of the researches made by M. Choisy. It was a point worthy of the attention of the members, and it would be of great interest if Mr. Chisholm would tell them the plan he adopted in building the great dome without centring, and what was the current way of building domical structures in India. In looking through Major Mant's sketches, he was much struck with the extraordinary beauty of some of the details. With regard to the origin of some of the ornament, there was no doubt that the influence of Byzantine work had travelled there, and supplied some of the ideas for it. He had much pleasure in proposing a vote of thanks to Mr. Chisholm for his extremely clear and lucid paper, and for the valuable plans and specimens of carved work he had brought to illustrate it.

General H. St. Clair Wilkins, R.E., in seconding the resolution, said he had never met Mr. Chisholm before, but had often admired his designs in India. With Major Mant he had been well acquainted. On one occasion the Major showed him the plans of the building for about five minutes, and asked him then to criticise them. He, however, replied that it was rather a large subject, and the only thing he could remark was that the tower was not calculated to stand. Mr. Chisholm appeared to have completed the palace in a very satisfactory way. He could not imagine a better position for an architect to be in than to have another man's plans, which could be altered, and with a large treasury behind him. He understood that the palace was built of stone. The native buildings in the Hindoo-Saracenic style were generally of stone, but in those days there were no estimates, and they were enabled to gratify themselves by producing the most wonderful structures to be seen in any part of the world. This building must have been expensive on account of the immense amount of ornament distributed through it. Mr. Chisholm appeared to have done very well indeed in the alterations he had made, and he had certainly done full justice to Major Mant. The Hindoo-Saracenic style was one very difficult for architects of the present day to indulge in on account of the enormous expense. The natives frequently constructed their buildings with a stucco face. He did not know how Mr. Chisholm constructed his dome, but he was well acquainted with domes in India, and particularly with the large dome in the City of Bejapur, a dome of such construction as was not to be met with elsewhere. The dome covered an area of about 19,000 square feet, and it had no immediate supports, owing to its ingenious construction. There were no buttresses outside; the dome was nearly semicircular; it was 10 ft. thick, built of brick, and the weight was all hung inside. [The speaker then explained the construction on the black-board.] He added that the dome was built about 250 years ago, and he believed it was really built on solid centrings. To repair this dome, for it needed repairing now, would be a very difficult undertaking indeed. The dome had great cracks in it, which appeared all round like the pips of an orange, but it was still sound in other respects. Major Mant designed a large building at Cawnpore, the expense of which was enormous.

Mr. Sills said he was well acquainted with Major Mant in India, both privately and officially, and he was very pleased he ha heard the paper read that evening by Mr. Chisholm. The verandah was a great difficulty in connexion with all the public buildings he had had to do with in India. He had a good deal of experience in connexion with painting, and he had found that the ordinary Indian painter used a kind of glove or rag, which he preferred to a brush.

Professor Aitchison believed that the chances were a hundred to one in favour of the Indian painter, who laid on his colour with a rag, producing a much better effect than our painters would with a brush as it would have variety of tone instead of being flat. It would be found that every kind of jewellery and woven work done by the natives for the natives was generally excellent in form and in colour. He had noticed that the buckles, clasps, and such work, done for the common people, were usually very fine, while when they were made for the English market they were of the most inartistic description. By contact with Europeans the most crude colours were substituted for the lovely shades of colour formerly used. He had heard from travellers in Persia that many of the domes there were built on mounds of earth according to the rule of thumb. M. Choisy in his book on "The Art of Building among the Byzantines," showed how centering had been abandoned, and how their vaults and domes had been constructed without any. It was necessary to go to India, Burma, or Siam, to learn a living style of architecture, and the most brilliant of our architects were immediately captivated by the living style they found there, and adopted it.

Mr. Thomas Blashill said that in looking at such modern work as he had seen, it had always struck him that a building in which the arch was introduced to a larger extent than it used to be in Indian work, seemed to lose the agreeable character possessed by the old Indian architecture. With regard to the verandah, was it not possible that more could be made of it than as a temporary expedient? The sketch Mr. Chisholm had put on the blackboard appeared to contain the germ of the proper order of constructing such buildings. He was always interested in seeing Indian wood-work. It might be liable to the attacks of insects, and also to the ravages of fire, but the wood-work of India was perhaps even more interesting than anything else, unless it were the stone work in which ornament of a similar character was used. It seemed a great pity that that class of design and construction was not more studied in this country, and any one who wished to see real Indian construction should go to the Indian Museum at South Kensington and inspect the ceilings there. He had never seen anything like these wooden ceilings, and something of the same kind could be seen in the Indian wood-work at the Earl's Court Exhibition.

Professor Aitchison added that it was possible the idea of the Durbar halls was taken from the throne rooms of the Roman imperial palaces. Referring again to the verandahs, there was one place where these were lavishly used internally, viz., at the Alhambra. Although the hot season there was not comparable to that of India, it was still extremely sultry, and almost all round the Courts of the Alhambra were to be seen cloisters formed of slender marble columns and thin arches on which were fixed a lattice-work of tiles, the plaster on which was carved into arabesque. The object there evidently was to get a through current of air.

The Chairman assured Mr. Chisholm that the sympathies of the Institute went out to every architecture under the sun—not only that which had been, but that which they hoped British ingenuity might produce in future years. Mr. Chisholm had shown what he could do, but very few of them were sufficiently fortunate to have clients who had palaces to build. At the same time, they were creatures of imagination, who lived in thought in marble palaces. One point, which had been referred to more than once, was as to the adaptation of verandahs to domestic purposes. They knew that the verandah was largely used in all Eastern countries, and he could not help thinking it was not used to the extent it might be in this country. No doubt our climate was a variable one; but there were a great many months in which they could enjoy what might be called a semi-out-of-door life. If, then, architects would pay more attention to the use of the verandah—not verandahs three or four feet wide, but of larger width—they could be utilised for ordinary purposes. A verandah such as he referred to was virtually a room—adding another apartment to a house at a small expense. Allusion had been made to Colonel Jacob and Mr. Harris. The works of these gentlemen were familiar to them, especially the works of Colonel Jacob, and

the excellent text-books published under his superintendence.

The vote of thanks was then put to the meeting, and carried by acclamation.

Mr. Chisholm, in replying, said that in some cases where the wall rose above the verandahs, they appeared like a cage dropped down, but if they could bring solidity above the lightness it would meet the case better. He then explained on the blackboard the manner in which he had designed domes. He had adopted Wren's principle as carried out in St. Paul's. Wren saw that if he could tie the dome in at the foot he could get a stable construction. He therefore constructed the cone and tied it at the foot, resting the dome on that. The dome was supported by a series of chambers between the cone of brickwork and the dome outside, and that seemed to be the true way of treating a dome. In the dome he had constructed at the College of Baroda, he built not exactly a cone, but turned the dome outside. On the plan there were sixteen cross walls all round between the two. The dome was constructed by two courses of stone, breaking bond, dowelled, and cramped together. The dome was 75 ft. across, and was built ring by ring in a serpentine form. With stone it was a much simpler form to deal with, because each course was cramped, and each was complete in itself, the rings working to a smaller eye until the dome was closed. As to foundations, it was not safe to put any greater pressure than a ton and a quarter on alluvial earth; in fact, it was better never to have more than one ton per superficial foot on the actual earth. They had to consider, not only what occurred on the surface of the ground, but that the changes caused by dry and wet seasons were likely to affect a building. Teak wood was never attacked by insects. As to ornament, there were one or two parent forms, and these gave every variety of form.

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Mr. A. Culshaw, past-President of the Liverpool Architectural Society, said that the President of his society was present, but he was not a member of the Institute, and that raised a point of very great importance. The Liverpool Society, presided over by a gentleman who had a very large practice, would not be represented on the Council of the Institute for the next twelve months just because their President was not a member of the Institute. They would say that it was the fault of their President that he was not a member; that might be so, but he should like them to consider another side of the matter, viz., of what good the Institute was in the provinces to those who belonged to allied societies. He thought that they would have a great difficulty in convincing several provincial members, whom he would like to see members of the Institute, that they could derive much benefit, in the present position of the Institute in relation to the allied societies, by becoming members.

Mr. W. Goldthorpe having said a few words as to the advantages to be derived by meeting in conference and discussing any grievances they might have,

Mr. John Holden, President of the Manchester Society of Architects, said that the Institute naturally took the first place amongst architects; it should therefore attach to itself the provincial societies throughout the country. That it did to a certain extent; and it seemed to him that it was for the different provincial societies to act as feeders. They should form connexion with the large number of outsiders—people who could not, or would not, join the Institute. It was asked, "What benefit shall I get by becoming a Fellow and by paying four guineas a year?" And really there was a great deal to be said for that view. Then provincial architects obtained, through their local societies, many of the advantages which the Institute had to offer. But that was rather a narrow view to take, and there was something beyond mere L. s. d. to consider, and he certainly thought that one of the objects, one of the principal duties, of a local society was to act as a "feeder" to the Institute. It should be the endeavour of all architects to join the parent society, and if they could only induce every architect in the country to join the Institute, of course there would be a solution of difficulties at once. But that was not possible. Many would not join, and many would not be eligible. One of the things which every provincial society ought to do was to render it impossible for their Society to drop out of representation on the Council

of the Institute by their President not being a Fellow of the Institute. A thing of that kind ought to be impossible. In the Manchester society it was a rule that every President, Vice-President, or Hon. Secretary must be a Fellow of the Institute. If a society chose to elect as President a gentleman—he might be a very good man; no doubt there were a great many good architects outside the Institute—who was not a Fellow, they must take the consequences of falling out of alliance. It was a pity that the Liverpool President was not a Fellow, and the very best thing for him to do was to join the Institute. Then as to election. There were a great many gentlemen outside the Institute who ought to belong to it; but many of them did not care to face the election by ballot. He could quite understand that gentlemen who had been in practice for twenty or thirty years, say, would sooner remain as they are than place themselves in the position of being voted upon by gentlemen who might be, or might have been, in their offices. He did not think that anything more was needed than for a candidate for Fellowship to bring forward his credentials as to ability, &c., and for him to show that he had been in practice for a certain number of years. The Council of the Institute was competent to judge whether a man was fit to be a Fellow or not; and such power ought to be given to the Institute at once. The number to be elected could be limited each year. In that way, he thought, a number of outsiders could be got to join the central body, who ought to belong to it. The provincial meetings like the present were of great importance. Many provincial members were wishful to meet metropolitan brothers, and in social meetings like the dinner which was to follow, life long acquaintanceships were formed.

Mr. John Slater said that had any doubt existed of the wisdom of holding a meeting in a city like Manchester, it would be removed after the discussion which had taken place. It was quite certain that nothing but good to the Institute could follow such discussions. One of the points which had been exercising the Council more than any other lately was as to the election of Fellows. Unfortunately, when the new Charter was framed, they were exceedingly anxious to give to the Associates, who, up to that time, had had no voice in the management of the Institute, a voice in affairs; but he was very much afraid that they had gone a little too far, for there had been during the last few years, undoubtedly, a sort of cabal—he did not use the word in any invidious sense—amongst the Associates, most of them London men, who did not like the idea of Fellows being admitted without going through the same mill as they had gone through. But a little reflection ought to convince those gentlemen that there was all the difference between the election of a man who had just qualified and a man who had been in practice for a long time. He felt very strongly on the subject, and if what occurred a year or two ago, when some admirable candidates were rejected through no fault of their own, then it might be necessary for the Council to alter the by-law and limit the election of Fellows to Fellows themselves. It was a scandal that certain gentlemen had been blackballed. It was easier to keep a man out of the Institute if a ballot was demanded than to get him in. As to what had been said as to the advantage of provincial members becoming members of the Institute, there was a great deal to be said from the point of view of Mr. Culshaw. It was unfortunately a difficult thing to say how the central body in London could give greater advantages to the provincial members. One way in which they would be able to do so would be if they had more funds at their disposal and if the membership increased, especially of Fellows. If they had more funds they would be able to do more in the way of lending books from the library to provincial architects. They had one of the finest architectural collections of books probably in the world, and the more they could duplicate those books the more they could increase their loan collection. Then the provincial members received the *Proceedings* of the Institute, and he did not think there could be two opinions of the immense value of that publication.

Mr. E. T. Hall said, in reference to competitions, could any one suggest any other course? That was the crux of the whole matter. Were they to select only a few leading architects in the profession—the men who had made their mark? If so, what became of the younger men? Or were they to say that when an architect had designed one large building he should not design another, and that younger men should have an opportunity? But he was quite sure that the older architects would not care for that, and his own view was that there was no other way of satisfying practitioners than by competitions, which would, he thought, continue more or less as at present. It was by competition that the reputation of many leading architects was made, and although it was a difficult question, yet they must face the facts and recognise that it was impossible to get another system more satisfactory than the present. The question of the election of Fellows had been engaging the attention of the Council of the Institute for certainly the last twelve months. It was to be regretted that the President of the Liverpool Society was not a Fellow of the Institute, but in answer to what Mr. Culshaw had said in regard to the advantages to be derived by joining the central body, might it not be said that the interests of architecture should be considered as well as a man's own personal interests? He hoped that they desired to benefit the society into which they were admitted, and one of the advantages of joining the Institute was that if a man should be elected as President of a local society he would have a voice in framing the policy which guided the whole Institute, and in that way of influencing architecture throughout Great Britain and even the colonies. They all desired that architects should influence the public, and if they wanted the public to take more interest in architecture some stimulus should be given to them. That could only be when the whole body of architects of the kingdom were united with one object in view—the advancement of the art of architecture. The public would be more influenced by such a body than they now are by the little local societies which, for all they knew to the contrary, were nothing more than little social clubs, and they would pay more respect to the members of such a body. In regard to the mode of election, he agreed with Mr. Slater that it was a scandal that any body of junior members should exercise a vote to exclude men who were much their seniors, and who had done a lot of good work in the country. It was hoped, when the power of voting was given them, that their public spirit would have made them feel their responsibility in exercising their votes; that they would not exercise that vote in any selfish spirit, or in any way which would restrain the influence of the Institute throughout the country; and he felt that, unless some change took place in the feelings of the Associates, that the vote would have to be withdrawn from them. In many societies the election of Fellows rested with the Council, and many had advocated that that should be the method adopted in the Institute; if it was not, he thought that it should rest with the Fellows alone. He would not attempt to forecast the decision of the Committee, which was now considering the question, but he would not be surprised if it took that line somewhat.

Mr. G. Bradbury, President of the Liverpool Architectural Society, said that after what he had heard he should seriously consider whether he should not run the gauntlet of the ballot. He thought that when a man had been honoured in his own city by being elected as a member of the local society, and had done good work there, it should not, in order to his becoming a Fellow of the Institute, be necessary for him to run the risk of being blackballed by persons who did not know him, and thereby suffer damage to his reputation. With regard to competition, he suggested that much of the evil would disappear if members of the Institute or of the local societies would decline to enter a competition except amongst themselves. If this were done, no Corporation would venture to throw over a competition of the whole country. The result of this would be that probably 50 per cent. of the outsiders would join the Institute.

Mr. Alfred Waterhouse thought the last suggestion was excellent and practical. Those who engaged in competitions might very well act in the way suggested. It was an exceedingly graceful suggestion, coming from an outsider, though he hoped that Mr. Bradbury would not long remain outside the Institute. With regard to the question of election, he was of opinion that the Institute must make a radical change in its mode of electing Fellows. His own view was that the power should be vested in the Council. The number would be limited each year, and the Council would take the onus of their selections. He did not think that justice had been done to the Associates. The feeling that they (the Associates) had passed an examination which the seniors had not, gave rise to a feeling that a little more stringency ought to be exercised in electing as Fellows men from the outside. He thought that a little allowance should be made under the circumstances. It would be a little hard on the Associates if their privilege should be taken away from them, especially as only a few acted in the way referred to.

Mr. Hall said that he should like to add that a relatively small number of voting papers were returned, doubtless because candidates for election were not known; he therefore suggested that members should vote for candidates approved by the Council, even although they did not know them.

Mr. Drew said that there was one point he should like to refer to, viz., the loss of time and money to a provincial member of Council who attended the Council meetings. In his own case it represented £10 and three days.

Mr. C. Fowler (London) said he should like to say how much he had been impressed with the improved style of architecture shown in the buildings erected in Manchester during the last ten years.

The Chairman said that the points which had been raised in the discussion would receive proper consideration by the Institute. In reference to the library, he might say that it was not used as much as it should be, and the Council had been considering for some time past how it might be made more useful to members of allied societies.

Mr. R. Knill Freeman also referred to this point, and said that if the library could be made more useful to provincial members it would be a great advantage.

A vote of thanks to Mr. Salomons having been heartily agreed to, Mr. Salomons, in reply, said that he did not wish to imply that he objected to competitions; he simply referred to the evils of them, and if anything could be done to get rid of those evils it would be a good thing. Mr. Bradbury's suggestion might lead to some practical issue.

A vote of thanks having been passed to the Chairman, the members dispersed, most of them inspecting the fine collection of architectural drawings now on view in the Art Gallery.

ANNUAL DINNER.

The annual dinner of the Institute, which was held in the evening at the Queen's Hotel, was attended by a very representative assemblage. The President of the Institute (Mr. F. C. Penrose, M.A., F.R.S.) presided, and the company included Mr. Samuel Hall, Q.C. (Vice-Chancellor of the Palatine Chancery Court), Mr. Alderman Mottram (Mayor of Salford), his Honour Judge Parry, the Very Rev. the Dean of Manchester (Dr. Maclure), Mr. W. H. Talbot (Town Clerk of Manchester), Dr. Ward (Principal of Owen's College), Mr. Alfred Waterhouse, R.A., Mr. W. Emerson, Mr. E. T. Hall, Mr. T. M. Rickman, Mr. J. Ely, Mr. E. Kirby, Sir E. Leader Williams, Professor Simpson, Mr. Alexander Graham (Vice-President), Professor Boddington, Professor Wilkins, Mr. J. K. Bythell (Chairman of the Ship Canal Company), Mr. John Brooke, Mr. Alfred Darbyshire, Mr. E. Salomons, Mr. R. Knill Freeman, Colonel Eaton, Mr. W. A. Royle, Mr. W. Goldthorpe (Chairman of the Salford Hundred Sessions), Dr. Niven (Medical Officer of Health for Manchester), Mr. A. E. Murray, Hon. Sec. Royal Institute of Architects of Ireland, and Mr. J. Ernest Phythian. The vice chairs were filled by Mr. John Holden, President of the Manchester Society; Mr. Thomas Drew, President of the Royal Institute of Architects, Ireland; and Mr. G. Bradbury, President of the Liverpool Society.

After the loyal toast had been honoured, Mr. Knill Freeman proposed "The Church and its Influence on Architecture." He remarked that in all ages of the world the best work of the architect had been devoted to the great Unseen. The influence of the Church on architecture had indeed been very great, and he believed that the converse was equally true, and that architecture had exercised a great influence on the Church.

The Dean of Manchester, who replied to the toast, incidentally referred to the criticisms which have been passed upon the architectural designs for the improvement of the Cathedral. He hoped the influences of which he had spoken would continue. Signs, however, were not wanting which, under the specious name of theological opinion, seemed to him to run counter altogether to the best principles of art. He alluded to the persons who objected to anything which might partake of the character of statuary, which might be supposed to lead people into wrong theological paths. There was no fear, he thought, in these days of anybody falling down and worshipping molten images. He submitted they ought to

demand that everything that was beautiful in nature, whether it was in the shape of a man, or in the shape of a flower, or whatever was created, should find its place in the creations of the architect, and he believed the architects of the present day were perfectly competent to produce representations of all such objects.

Mr. Waterhouse proposed "The Bench and the Bar," and took advantage of the occasion to say a word in defence of Mr. Street, the architect of the Royal Courts of Justice in London. Mr. Street, he said, was hampered by a vast amount of instructions; for instance, in prescribing the level of the Great Hall.

Vice-Chancellor Hall, in responding, paid a compliment to Mr. Waterhouse. "As barristers," he said, "what we want are chambers like those designed by Mr. Waterhouse, which are models of everything that chambers ought to be, except this, that the cost is said to be too much. Again, we want in London and all over the country law courts like those of Manchester. What we do not want are courts like those of the Royal Courts of Justice. Whatever the cause was—and I believe Mr. Street was not to blame—they are not satisfactory. I believe the person to blame is the man who was in charge of the Works Department in London, the man who ruthlessly cut down the plans and expenses; he was the man who ought to be execrated, as indeed he has been—(a voice: Executed),—and who ought to have been executed if justice had been done, because he was the man who made the buildings to be the most unmitigated nuisance to the whole profession.

Judge Parry, in a humorous speech, proposed "The Corporations of Manchester and Salford," the toast being acknowledged by the Mayor of Salford and the Town Clerk of Manchester.

Mr. T. Drew then proposed the toast of "Architecture and the Sister Arts." In the course of his remarks he referred to the improved position of architecture now, as compared with forty years ago, when architecture was quite a subsidiary art; now, by the efforts of modern architects, architecture had taken her place as the mother of the arts—as the chief and the oldest of the arts.

Mr. J. E. Phythian replied, and, alluding to a remark of Mr. Knill Freeman, to the effect that this was a utilitarian age, an age of the lowest tender, he said that, though that might be so to some extent in Manchester, he could assure the Institute of Architects that Manchester was awakening to the necessity of architecture, sculpture, painting, and the decorative arts generally.

Mr. John Slater, in proposing the toast of "The Victoria University and its Colleges," said that at one time it was considered the proper thing to take a boy from school at the age of 14, when his real education was only beginning, and to plunge him into the vortex of commercial life with but a smattering of education. Much the same idea was held with regard to the profession to which many of those present belonged, and if a boy had a taste for drawing, his fond parents used to think that it was a superfluous thing to give him general culture, and he was put into an architect's office to obtain what education he might. All this was now changed. The Institute had done much, by its scheme of examinations, to lead architectural education into the proper channel. There might be many differences of opinion as to the advisability of multiplying the number of degree-giving bodies, but whatever might be the general opinion upon that point, he thought there could be no doubt as to the claims of a city like Manchester, which had done so much in the cause of education, that she should be the centre and home of a new University. The buildings of the Universities at Liverpool and Leeds, as well as Owen's College at Manchester, were due to the genius of one man, and it was a source of gratification to them to see amongst them the eminent architect of those buildings—Mr. Waterhouse. And he could not but think that it was an exceedingly fitting compliment of the new University to pay to one to whom they owed so much in the way of the material and external shrine of the buildings to make him the first recipient of an honorary degree in the University. It was an act which conferred equal honour on Mr. Waterhouse and on the University, and they were both to be congratulated upon it. The Liverpool College had a chair of architecture, but Owen's College had not; but from what had been observed and from what he had read, there was some hope of an art chair being established, and it would be a great advantage if that was so. But even if it were not, there were many classes which architectural students could attend with advantage to themselves. A new University like that at Manchester had, of course, something lacking; it was lacking in the traditions of antiquity—the long life of honoured names; of statesmen and warriors who had helped to make English history; but this was, of course, inevitable. There was one suggestion he would make, viz., that they, in Manchester, should endeavour to provide for open spaces around their public buildings. There was nothing which was more crippling to a fine building than for it to be surrounded by a number of mean buildings in close proximity, for they entirely prevented its fine proportions and elevation from being properly seen.

Principal Ward, in response, said that the study of architecture must interpenetrate many of the studies of the colleges. In his opinion, there should be in University Colleges means found for impressing upon students all the great arts, theirs among the number. He thought it was not foreign to the purpose of University Colleges that professorships of the fine arts should be established in them, and he heard with great pleasure it was contemplated that such a professorship should be established at Owen's College.

Mr. J. Ely then proposed the toast of "The Visitors," coupled with the name of Sir Leader Williams, who, in reply, said there was a time when architects and engineers were bound together, and he thought they should still be. The cathedrals and castles of England engineers as well as architects were proud of.

Professor Simpson, Liverpool, proposed the toast of the "Royal Institute of British Architects." In his opinion the most interesting work done by the Institute was in having such interesting papers read before it, not only by architects, but by craftsmen. The value of these papers was not only that they were useful in themselves, but they were the means of bringing about that union of the different arts and crafts which so many of them were anxious to see accomplished. The Institute was also able to bring into touch with one another the architects of this and other countries. The interest the Institute took in students was also very great, and perhaps some of its most valuable work was in assisting students by its money and other prizes, the value and number of which had largely increased since he was a student. It was interesting to look back ten or fifteen years for the names of those who were students then, and who took prizes, and to realise that they were the architects of to-day. The speaker then mentioned the names of some of the most distinguished Presidents of the Institute, such as Cockerell, whose work still lived, and was likely to live; Tite, the champion Classic; George Gilbert Scott, and G. E. Street (friendly foes and champions of the great Gothic revival), Mr. Waterhouse, and their present President, who had filled the chair with so much honour. Mr. Penrose had just returned from his labour of love, his visit to Athens, to see if it was not possible to retain that masterpiece of the world's art, the Parthenon, for another 2,000 years. Mr. Penrose was not only known as an architect, but as a scholar, one of the greatest living authorities on Athenian art, and his well-known book was a standard work all over Europe. He had, therefore, very much pleasure in coupling with the toast the name of the President, Mr. F. C. Penrose.

Mr. Penrose, in reply, said that the Institute devoted a great deal of time to the general objects of the profession, and he hoped and trusted that their efforts to remove some of the difficulties with which members of the profession had to deal were successful. The Institute did not embrace the whole the profession, but he believed it was gaining in that respect. The Council were quite disposed to favourably listen to any suggestions as to modifications in their procedure which would lead to others joining them. The Institute had been established nearly seventy years, and he hoped it would exist many more and continue to do good to the profession. He was very glad that in his year of office the first annual dinner of the Institute had been held. He had left the Patthenon after a careful study, believing that it would be capable of resisting a much greater earthquake than the last. That earthquake did no serious damage, but it pointed out defects which would be remedied without any prejudice to the edifice. In conclusion, he called upon Mr. Holden to respond to the toast of the "Allied Societies."

Mr. Holden said that he was of opinion that all members of the profession throughout the country should be under one central control, so far as the general principles of their work was concerned. There no doubt were, and would be, small local differences, but the fewer of these the better. But in regard to the broad principles of the profession there ought to be no doubt or difference. He was but expressing the view of the allied societies in saying that the Institute might rely upon the loyal support from them on all matters connected with the honour and integrity of the profession.

The proceedings then terminated.

Illustrations.

PULPIT, ST. ALBANS, TEDDINGTON.

THIS pulpit, which is in hand, is to be executed in oak. The wood will be stained dark with ammonia, and parts will be gilded. The under side of the canopy, forming a concave sound board, will be richly painted and gilded. The figures on the pulpit and on the second stage of the canopy are designed by Mr. Reginald Hallward, and are to be executed in gesso in fairly high relief, and decorated by him. The angels on the upper portion of the canopy will be by Mr. Conrad Dressler. All the woodwork is being carried out by Mr. Lawrence A. Turner.

The height from floor to top of canopy is 32 ft. The total cost of the work is estimated at about 900*l*.

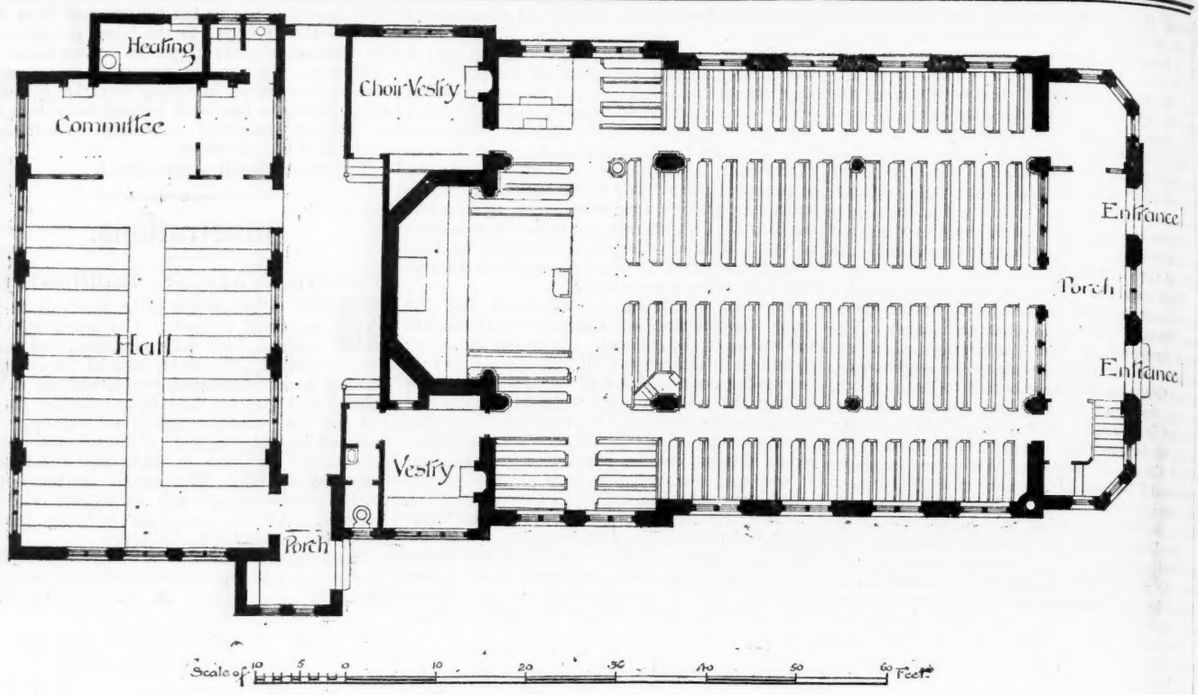
A. H. SKIPWORTH.

THE COMMERCIAL UNION ASSURANCE COMPANY.

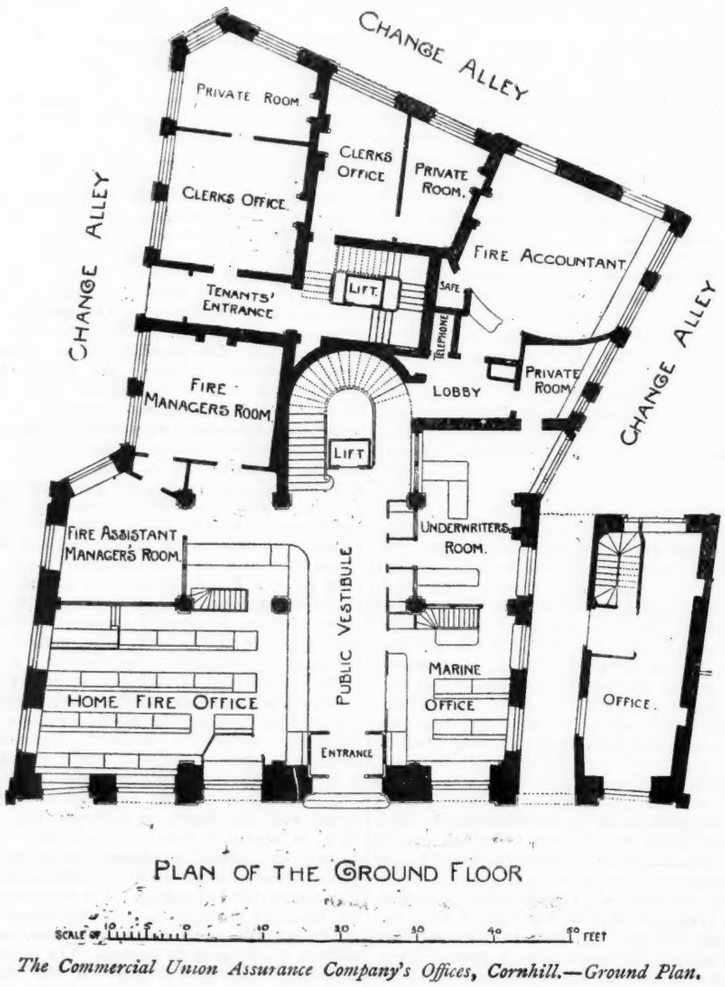
IN 1892 this Company purchased the freehold of a block of houses, comprising Nos. 23, 24, 25, 26, and 27, Cornhill, and the separate block of houses in rear of same, comprising Nos. 4, 19, 19A, and 20, Change-alley. By virtue of a scheme whereby the public benefited by the opening of a direct thoroughfare between Cornhill and Lombard-street, the portion of Change-alley which separated the two blocks of property referred to was, with the sanction of the authorities and adjoining owners, abolished, and the whole of the property which had been purchased was thus made available as the site of a large building, comprising an area of about 6,500 square feet. On this site the new offices of the Company have been erected, the Cornhill portion being exclusively occupied by their own staff, and the rear portion by tenants; the building being, however, so arranged that the whole or any portion of the latter may be absorbed by the Company should the extension of their business require it. The building contains nine floors in the Cornhill block, and seven in the Change-alley block. There are two basements beneath the level of the street which are executed in white glazed bricks throughout, and are occupied by store-rooms, strong-rooms, engine-room, lavatories, &c. On the ground-floor of the Cornhill block, the Home Fire, the Marine, and the Fire Accountants' departments are provided for, with managers' and underwriters' rooms. On the first-floor are the Life Office, with Actuary's and Doctor's rooms, the Adjuster's, and the Marine Accountant's offices. The second-floor is occupied by the Board-room, 42 ft. by 20 ft., the Directors' luncheon room, Committee and waiting rooms, and the Secretarial department. On the third-floor are the Country Fire, and the Fire Guarantee departments. On the fourth-floor the Foreign Fire office occupies a room 85 ft. by 22 ft., with plan room and typewriters' room. On the fifth-floor are the clerks' luncheon room, kitchen, and offices attached, housekeeper's room, and servants' hall, &c., and the sixth-floor is devoted to bedrooms for servants.

The Cornhill front is executed in Portland stone, and the fronts in Change-alley, where light is obtained from comparatively narrow spaces, are executed in polished granite and white glazed bricks varied by the introduction, to a moderate extent, of colour. The floors and roofs are fireproof throughout. In the ground-floor offices the walls are lined with marble, and the ceilings are finished in faience. The wood work throughout the greater part of the building, including fittings, is executed in polished mahogany. The floors are laid with teak blocks, except in the Director's rooms, where they are oak parquet. The staircases and corridors have the walls lined with faïence, and the floors laid with marble mosaic. The stair is constructed in teak, and the treads finished in marble mosaic. The wires for electric lighting are encased in iron pipes throughout.

Owing to its position, the building has been subject to restrictions all round, and even in Corn-



Unitarian Church and Hall, Maida Vale.—Plan.



The Commercial Union Assurance Company's Offices, Cornhill.—Ground Plan.

hill, in respect of light and air, and it has been completed without a difference having arisen.

The whole of the work has been designed by the architect, Mr. J. Macvicar Anderson. The contractors have been:—For the general contract, Messrs. Wm. Cubitt & Co; for granite, Messrs. J. Whitehead & Sons; for marble, Messrs. A. Boucneau & Son; for faience, the Burmantofts Works; for engineer's work, Messrs. James Slater & Co.; for hydraulic lifts, Messrs. Eastons, Anderson, & Goolden; for mosaic floors, Messrs. Burke & Co.; for teak and parquet floors, Mr. J. F. Ebner; for constructional iron work, Messrs. Matt. T. Shaw & Co.; for ornamental ironwork, Mr. W. Shrivell; for plaster work, Mr. Annan; for bells and speaking tubes, Messrs. John Bryden & Sons; and for electric lighting, Messrs. Hayward, Tyler, & Co., under the supervision of Messrs. Handcock & Dykes, the electrical engineers.

The carving throughout was executed by Mr. G. Hawkings, and in the Cornhill front has a symbolic character. The tympanum of the pediment over the entrance has a central shield supported by figures and emblems representing the title and business of the Company. On each side of the shield are female figures clasping hands and so illustrating the idea of *Union*. Surmounting the shield is a winged globe, the symbol of *Life*. The figure on the right is seated on a bale of goods signifying *Commerce*; the one on the left is seated on a coil of rope and holds a trident, suggesting *Marine*. There are also introduced minor accessories, such as a dolphin, a steering wheel, a furnace, an anchor, &c., with the view of further emphasizing the respective emblems. The keystones of the ground floor arches, of which there are seven in all, are carved with male and female heads alternating, designed to illustrate the same idea as the group in the pediment, but in somewhat different aspects. Two of the female heads represent *Fire*, being decorated with flambeaux, one having a conventional representation of lightning and a thunderbolt, balanced in the other by a salamander. The two other female heads symbolise *Marine*, being surmounted by the hulls of vessels, one having a life-belt and ropes dependent, the other the screw of a steamer. Two of the male heads are emblematic of *Life*. They are varied in treatment, each supporting a winged globe and decorated with fruit. The central keystone is carved with a severely bold and simple head of classic character, crowned with intertwined vine and elm leaves, suggesting the idea of *Union*. Thus, to those who can read the symbols, the building tells the story of the *Commercial Union* of *Life*, *Fire*, and *Marine* Insurance.

THE MARLING SCHOOL, STROUD.

THIS school was founded by a gift of 10,000*l.* from the late Sir Samuel Marling, with an amalgamation of existing town charities, under a scheme of the Charity Commissioners. It comes under the head of "Secondary education."

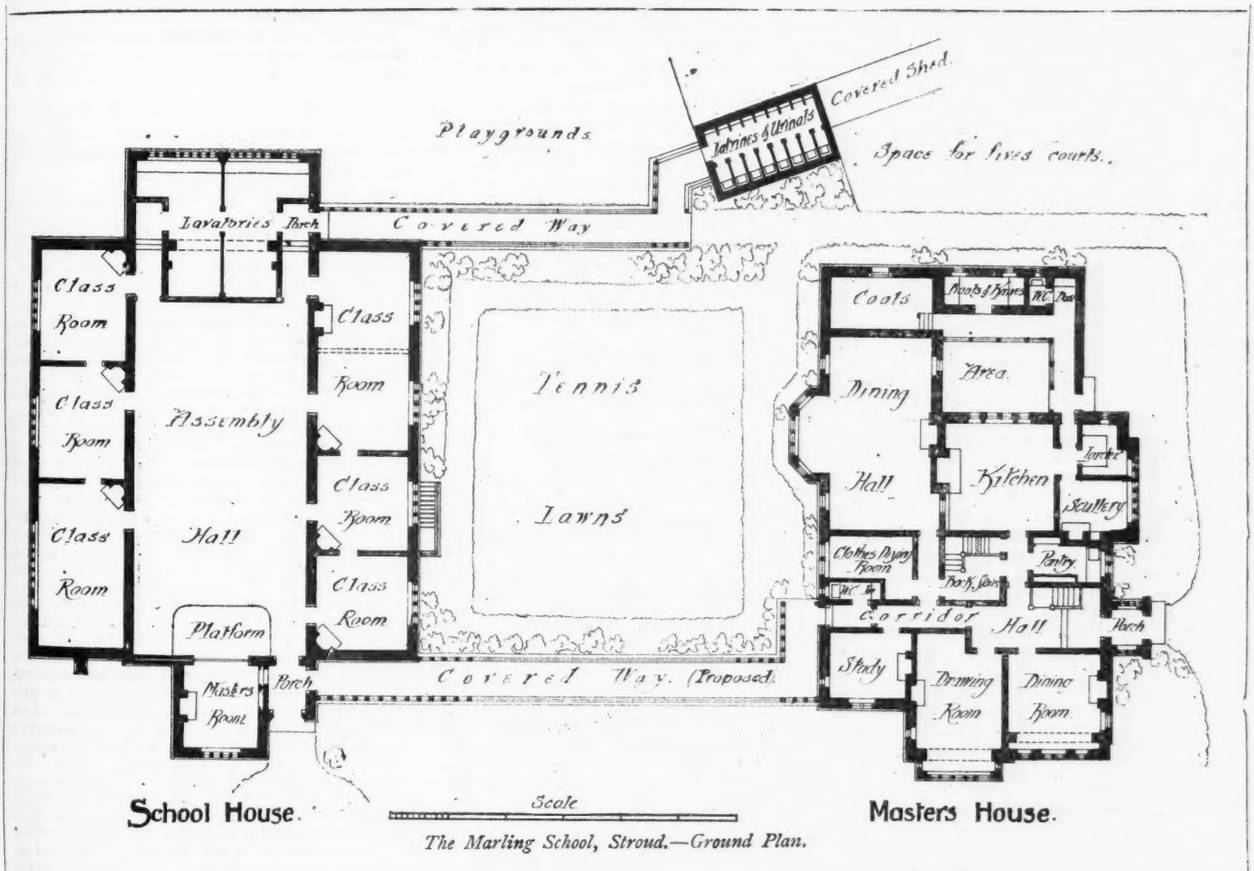
The building is designed to accommodate about 130 scholars, fifteen of whom are residents in the headmaster's house, which forms the second block shown in the view. It was intended to unite the two buildings by a covered passage, but this has not yet been done.

The school is entirely built of the Quarhouse freestone from the neighbouring quarries, dressed with Bath stone, which matches it exactly; and the roofs are covered with old stone slates, taken off some of the mills which have been recently demolished.

The flèche acts as an exhaust ventilator, and also contains a tubular bell.

Messrs. English & Son, of Stroud, were the contractors. W. HOWARD SETH-SMITH.

THE MARLING SCHOOL, STROUD.



The Marling School, Stroud.—Ground Plan.

MAIDA VALE AND KILBURN UNITARIAN CHURCH.

THE design for this building was the accepted design in a limited competition. The perspective shows the completed buildings, the first portion of which—viz., the congregational hall in the rear—has been already erected and used for some months. This hall will hereafter be used as a schoolroom in connection with the church.

The church will hold 400 (exclusive of the choir), and the nave being in only two bays, a good congregational plan has been obtained.

The buildings have been designed in a late phase of the English Pointed style, the walls being faced externally with red Suffolk bricks and stone dressings from one of the Bath stone quarries. The roofs are covered with Broseley tiles. Internally the walls will be plastered, the piers, arches, &c., being in Monk's Park stone, including the walls and vaulting of the chancel. The turret at the south-west angle contains the stairs to the gallery, with a belfry on its upper stage.

The hall has been built by Messrs. Killby & Gayford, from the designs and under the personal superintendence of the architect, Mr. Howard Chatfeild Clarke. The church, as already implied, still remains to be built.

CHURCH, ELLISTOWN, LEICESTERSHIRE. — A new church at Ellistown has just been consecrated by the Bishop of Peterborough. The church (St. Christopher's) is built of red Ellistown brick. The architects were Messrs. Goddard and Paget, and the builders Messrs. Scurr, Jowett, & Co. The structure, consisting of a chancel, nave, and west porch, over the latter of which is a turret containing one bell, is built to seat 270 people. The cost of the building is 1,800*l.*

THE ARCHITECTURAL ASSOCIATION: ANNUAL SOIRÉE.

THE annual soirée of the Architectural Association was held on Friday last week at St. Martin's Town Hall, Charing Cross-road, when a large number of members and friends assembled to witness the performance of a comic opera entitled "A Celestial Institute: An Eastern Episode," in two acts.

The inspiration for the play has been Mr. Du Maurier's "Trilby," and several points in the burlesque were derived from it, while five of the characters in the book are represented in the play. At the same time the author of the burlesque has been indebted for at least one good idea to the Röntgen rays, while much of his material was found ready to hand in the proceedings of the Institute of Architects, though it was expressly stated that the introduc-

tion of a burlesque "Institute" was not intended to cast any reflection on that august and much-respected body.

The Celestial Institute is situated in Pekin, and the play opens with several Chinese lady architectural students who consider it fun to be "playing at architecture," and one of whom has sent in for the studentship a design in which are "grand, great, granite columns in the centre of the elevation, and the rest solid brickwork," while another has designed something which would be sure of winning because it was drawn so beautifully, though they would not be able to guess what it was meant for. The Librarian, who shortly after enters, tells the students on what conditions they will be admitted to the library, and concludes, in a song, as follows :—

"You must not draw, you must not trace;
A book you lose you must replace;
And many fines must pay to me,
If you come to the library."

It appears that the students have met on the day of the election of members of Council, and that the Emperor (not of China, but of Germany: are the Germans supposed to have conquered China?) has decreed that they must all be married, in order of rank, within a month of being elected. But these dictatorial intentions are not to be carried into effect without complications, for early in the play three other characters enter, Taffy, the Laird, and Little Billee, who are informed by the Librarian that all details of the architecture of the country are copyrighted. Soon after, Svengali enters with Trilby, and noticing from a placard that the Institute is in want of a President, "wages 15*l.* a year," offers his services, and, though without any qualifications for the exalted position, he hypnotises the others into electing him. One of the scenes represents a meeting of the Pekin Institute; the rapid way in which the minutes of the last meeting are read by the secretary caused much amusement, as did the announcement that in future ladies admitted for the first time since their election would not be required to embrace the chairman. Taffy, the Laird, and Little Billee having been admitted as honorary members, the secretary suggests that the three should be asked some question just to keep up the Institute's reputation as an examining body, and this having been agreed to, the question is asked, "What is the greatest architectural institution in the world?" and the reply is, of course, "The Architectural Association." Little Billee then sings a eulogy of the Association, which was very well received. In the opening scene of the second act some of the girl students are regretting the approaching marriages, and one of them asks Taffy what he will do when she has gone, and he replies that, lost to the world, he would sink to uttermost depths of despair and bury himself—under the Building Act. ("What a tombstone!" one of the audience remarked.) Little Billee regrets that his success in winning Soane medallions, &c., to lay at Trilby's feet has been in vain, as well as his efforts to qualify as District Surveyor and earn a miserable pittance to support her. But the members of the Council, hating him for his success, conspire against the President. One asks, "Are we all friends?" and the reply is, "Are we not all architects?"—"and devoted as brothers?" "Are we not all surveyors?" They take objection to the "architectural stores," and to the President "collaring all the jobs and running architecture on commercial principles," and they sing of their diminished practices since Svengali came amongst them; but their principles are not of much account, for they consent to join the co-operative stores, and, in a subsequent song, Svengali tells how he has started "architecture on a plan that's systematic," the conclusion of one verse being as follows :—

To millionaires in search of something chaste and full of brains,
We recommend a length of this, we've christened it Park-lane;
It is solid in appearance, and it's solid gold inside,
Much thought has been expended on the stone-joints, extra wide.

But the combination is destined to be short-lived, for the Emperor (first in the character of Napoleon the Great, and then as the Emperor of Germany, whose little weaknesses are emphasised, much to the delight of the audience), comes upon the scene and decides to "try a little invention" of his own by applying scientific principles to moral investigations, which he had christened "the moral Röntgen ray." The idea, which, if scientific, would be capable of particular application, was capitally worked out, and the whole company, with the exception of the Emperor, pass before the instrument which is used. The celestials, including Svengali, are pronounced to be "shocking black," and are found to be "all tainted with the shade of commercial architecture," while the three Englishmen are found to be "white as driven snow, with the high ideals of sublimest art." The end soon comes, for the Emperor, who, whatever his other faults, is represesented as a good friend to architecture, declares that "true artists to the backbone shall rule the Institute for ever," and that Little Billee must be President, and also that the Institute shall in future be "an affiliated branch of the great Architectural Association."

The characters were: A Secretary, Mr. A. Stalman; a Librarian, Mr. F. D. Clapham; Candidate No. 1, Mr. E. S. Collins; Candidate No. 2, Mr. T. H. Turner; Councilman, Mr. E. A. Rickards; Sub-Councilman, Mr. Alfred Cox; Committee, Mr. R. C. Bolton; Sub-Committee, Mr. H. H. Gilbert; Emperor, Mr. H. Phillips Fletcher; Taffy, Mr. A. Lovejoy; Laird, Mr. W. W. Furlong; Little Billee, Mr. S. Constanduros: Svengali, Mr. G. B. Carvill; Trilby, Miss Florence Lincoln; Chrysanthemum, Miss Grace Wylde; Ylang Ylang, Miss Ada Yerbury; Studentena, Miss Rimell; Studentina, Miss Carvill; Studentoe, Miss Ethel Williams. Boys: Messrs. D. Carvill, S. Elston, P. Albert, A. Watts, H. Williams.

There have been some thirty architectural plays since the Association was constituted, but we do not think that any of them have shown greater merit than the "Celestial Institute," certainly none within the last few years, though that is not saying much. The play was not so grotesque as on former occasions, the players showed no lack of confidence in their parts, and the work evidenced painstaking effort and careful rehearsal on the part of all concerned. The costumes generally were very effective, and with the stage accessories some pretty effects were obtained. Though the play was, perhaps, lacking in topical allusions, there was an absence of those personalities which, on previous occasions, were calculated to give offence in some quarters, while, on the other hand, the general interest of the play was well sustained. The present is the first time that ladies have taken parts, and the innovation was in every way a success. If the play is worth doing at all it is worth doing well, and girls' parts cannot well be taken by men.

The author of the play was Mr. E. Howley Sim, the new assistant secretary of the Association, the music was composed by Mr. Leonard Butler, and the stage manager was M. C. B. Carvill.

COMPETITIONS.

REBUILDING BEDFORD GENERAL HOSPITAL.—In this limited competition among seven invited architects the Assessor, Professor T. Roger Smith, recommended for the first premium a design which on opening the envelopes proved to be that submitted by Messrs. Stephen Salter and Adams, and for the second that submitted by Messrs. Houston and Houston. The committee of the hospital have adopted the report, and it may be worth note that they have paid the premiums without making the stipulation sometimes introduced that if the successful competitor be employed to build the hospital the premium shall merge in his commission. The designs, all of them by architects who have had experience in hospital work, are very good, as was to have been expected.

ARCHITECTURAL SOCIETIES.

NORTHERN ARCHITECTURAL ASSOCIATION.—Last Saturday a party of members of this Association visited the *Newcastle Chronicle* buildings, which occupy a site opposite the Stephenson Monument in Westgate-road. The ground-floor frontage facing Westgate-road is occupied by the general office, a room divided into compartments by elaborately-carved oak screens, with Rose Royal marble dados and Pavonazza and Sienna marble chimney-pieces with Pavonazza over-mantels. The pilasters encasing the iron supports to the girders of the upper stories are of alabaster and carved from full-sized drawings supplied by the architects, Messrs. Oliver & Leeson, and carried out by the late Mr. Robert Beall. The machine and printing room is a magnificent compartment, thoroughly fireproof, and containing all the latest appliances for newspaper printing. A large addition has recently been made on the site of an old warehouse, which was pulled down for additional offices in connexion with the staff. This building is faced throughout with Burmantofts ivory-coloured glazed bricks, and the ground-floor windows are protected on the outside with very elaborate wrought-iron grilles of excellent workmanship, which have been carried out by Messrs. Bainbridge & Crimson from the designs of the architects, Messrs. Oliver & Leeson. On the first floor, above the machine-room, is the compositors' room, principally occupied with Linotype composing-machines, twenty-six in number. Altogether the various buildings occupy an area of over 2,000 square yards, and are said to be replete with every modern mechanical and sanitary appliance.

FOUNTAIN OUTSIDE THE HOFBURG, VIENNA.

THIS fountain, which is placed in the wall of the Hofburg Palace at Vienna on one side of the entrance—to be balanced ultimately by another one on the other side—is one of the designs of the late eminent sculptor Professor Tilgner. Although it is not in a taste with which English artists will have much sympathy, there is a great deal of vigour and movement in the design, and it is interesting as an example of the style and tendency of modern German sculpture.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, Sir Arthur Arnold, Chairman, presiding.

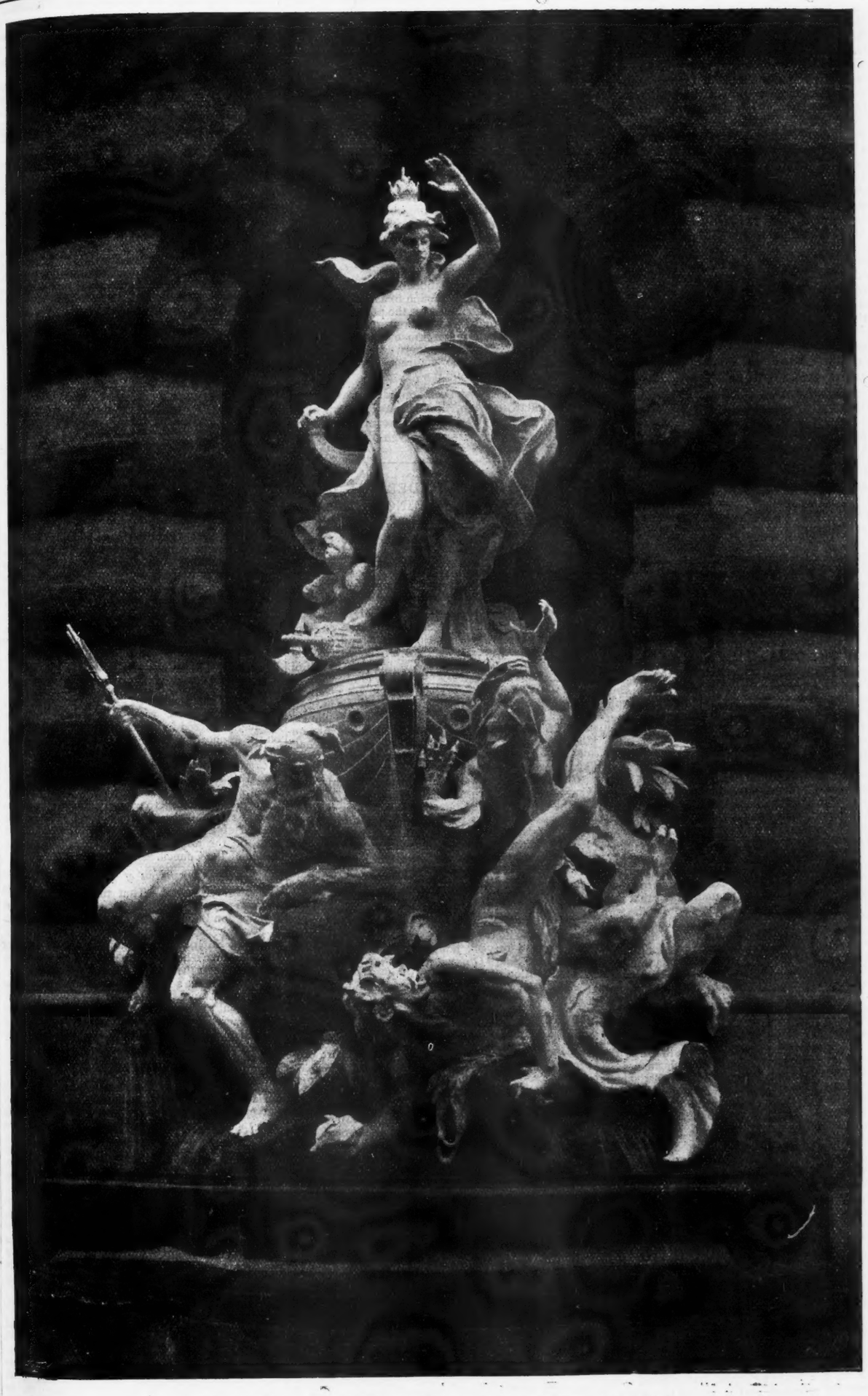
Loan.—On the recommendation of the Finance Committee it was agreed to lend the Lee District Board a sum of 1,000*l.* towards the purchase of land for a storeyard.

The Architect's Department of the Council.—The General Purposes Committee brought up the following report, the recommendation being agreed to :—

"On December 10 last we reported that Mr. Blashill, the superintending architect, had attained the age of 65 years, and on our recommendation the Council passed the following resolution, viz. :—'That, as the retirement of Mr. T. Blashill would cause inconvenience to the public service, he do continue to hold his appointment for another year, and that it be referred to the General Purposes Committee to report what (if any) changes in the work of the architect's department it is now desirable under the circumstances to make.' A sub-committee whom we appointed for the purpose of dealing with the above reference have been going thoroughly into the whole question of the present organisation of the architect's department. We have had an interim report from the Sub-Committee, from which it would appear that some re-arrangement of the duties devolving upon the department is necessary. We have, however, recently received from the Housing of the Working Classes Committee the following resolution passed by that Committee, viz. :—'That, having regard to the re-arrangement of the work of the architect's department now under the consideration of the General Purposes Committee, it is not desirable to make the architect responsible for the planning and designing of working-class dwellings to be erected by or for the Council, and that accordingly (any former resolution of the Committee notwithstanding) outside architects should for the present be employed for all such dwellings, except those on the remaining sites on the Boundary-street area, and on the Brook-street, Cable-street, and Cotton-street sites.' We concur in this proposal of the Housing Committee, and, as it will, if carried out probably affect the problem of reorganising the department, we think that, before taking any definite steps in the matter of reorganisation it would be well to wait and see the result of the arrangement. We have accordingly adjourned the further consideration of the question of reorganising the architect's department for six months, and we recommend—'That the course taken be approved.'"

Falcon-road and Latchmere-road, Battersea, Railway-bridges.—On the recommendation of the Improvements Committee, it was agreed that the estimates of 12,065*l.* 11s. 3d. and 4,788*l.* 14s. 4d. submitted by the Finance Committee be approved, and that, subject to a contribution by the Vestry of Battersea of one-third of the cost, the Council do arrange with the London and South-Western Railway Company for the reconstruction of the bridges over Falcon-road and Latchmere-road, Battersea, the work being charged for under an agreed schedule of prices, and in accordance with the quantities of work actually executed.

Proposed Tunnel, Greenwich.—The adjourned report of the Bridges Committee, the substance of which we printed last week, page 425, was considered.



FOUNTAIN ON THE HOFBURG FAÇADE, VIENNA.

THE LATE HERR TILGNER, SCULPTOR.

Colonel Ford regretted that more information had not been afforded on the subject, and said that he was more in favour of a free ferry than another tunnel.

Mr. Beachcroft also regretted that more information was not forthcoming, and said he wanted to know what would be done for the vehicular traffic, seeing that the proposed tunnel was only for foot passengers. He moved that the further consideration of the matter be postponed.

This having been seconded, the motion was, on a division, agreed to, 59 voting for and 46 against.

Bethnal Green Coroner's Court.—The Joint Committee on Coroners' Courts and Mortuaries reported in reference to the new Coroner's Court, Bethnal Green. They stated that on June 18 last they submitted to the Council the plans, specification, and estimate (amounting to 3,000*l.*) of the cost of erecting the Coroner's Court in Church-row, Bethnal Green, and the Council referred the execution of the work to the Works Committee. The Works Committee subsequently reported that they were not satisfied of the sufficiency of the estimate, and tenders were invited for the erection of the Court. The tenders received were as follows :—

Mr. A. Wallis	£2,942
Messrs. J. Jarvis & Sons	3,065
Mr. A. E. Symes	3,218
Messrs. J. Shillitoe & Son	3,290
Messrs. J. Simpson & Son	3,295
Messrs. G. Munday & Sons	3,406

On the 3rd of December the Council accepted the tender of Mr. A. Wallis. The contract was signed early in January, and the architect gave an order to Mr. Wallis to commence work on the 20th of that month. At the end of March they were informed that, notwithstanding repeated applications from the architect, the work had not been commenced, and that Mr. Wallis was raising some question with regard to the payments clause of the contract. They did not see their way, in view of the fact that the contract was signed so long ago, to entertain any proposal for its alteration in any respect, and they so informed Mr. Wallis, at the same time stating that unless they heard from him by the 30th of March that he had decided forthwith to commence the work, they should be under the necessity of recommending the Council to determine the contract. No reply to this letter was received from Mr. Wallis.

The Committee proceeded as follows :—

"Owing no doubt to the disturbed condition of the building trade, Messrs. Jarvis & Sons, whose tender was next lowest to that of Mr. Wallis, were not prepared to accept the contract if offered to them at the amount of their tender, and we, therefore, asked the Works Committee if they would be willing to undertake the work at the price of 3,218*l.*, the amount of the next tender, that of Mr. A. E. Symes. They have now informed us that they are not prepared to accept this figure, but we are given to understand that they would be willing to undertake the work for the sum of 3,500*l.* The architect has considered the expressed willingness of the Works Committee to undertake the work for 3,500*l.*, and he thinks that although this is a good deal beyond his estimate made eleven months ago, the work should be given to the department on these terms. He points out that although the actual rise in wages may not of itself justify this advice, the building trades will be for some time in an unsettled state, that meanwhile the matter presses, and that it may be reasonably hoped that some saving will be effected which will be to the Council's advantage. In all the circumstances we consider that the contract with Mr. Wallis should be determined and that the work should be entrusted to the Works Committee at the revised price of 3,500*l.* We have sent to the Finance Committee a supplemetary estimate of 500*l.*, and we recommend :—

'That the supplementary estimate of 500*l.* submitted by the Finance Committee for the erection of the Bethnal-green coroner's court be approved, that the contract with Mr. A. Wallis be determined by notice to be prepared by the solicitor, and that the plans, specification, and revised estimate of 3,500*l.* be referred to the Works Committee with a view to the execution of the work without the intervention of a contractor; but that, in the event of that Committee not being satisfied with the estimate, tenders be invited for the erection of the court.'"

Mr. Boulnois asked if all the contractors who had tendered had been again asked what they would carry out the work for.

Sir G. Harris, the Chairman of the Committee, said that some of them had, but not all.

Mr. Roberts moved that the matter be referred back for further consideration. The circumstances in the building trade had altered since the architect reported, and it would be an act of injustice to outside contractors if the work were given to the Committee at the sum named without giving the contractors an opportunity of stating at what sums they were prepared to carry out the work. He hoped that it would never be true to say that the Council showed preference to its own Committee over outside contractors, many of whom were firms of a very high character. He denounced the unfair action of the men in striking against private employers for a rise of wages while staying on with the Council at the old rate, and thus making the men on strike pay in rates the wages of those who continued in work. He was glad that the carpenters had determined to treat public and private employers alike.

Mr. White seconded, and after some further remarks the amendment was agreed to, on a division, by 75, against 32.

London and Provincial Tenders.—On a recommendation of the Stores Committee in reference to the supply of boots for the Fire Brigade, Mr. Holland moved—

"That the recommendation be referred back to the Committee, with instruction to ascertain whether the excess of the London over the provincial tender can be explained by the difference in the rate of wages paid by the London firm over the provincial firm, and to consider, if such excess can be so explained, whether the contract should not be awarded to the London firm."

The motion having been seconded, was, after a protracted discussion, lost on a division by a large majority. The Council having transacted other business, adjourned at seven o'clock.

APPLICATIONS UNDER THE 1894 LONDON BUILDING ACT.

THE following recommendations of the Building Act Committee of the London County Council have been agreed to, those applications which were granted being subject to certain conditions :—

Lines of Frontage.

Brixton.—That consent be not given to the erection of an additional story upon the existing one-story shop at No. 97A, St. Mark's-road, to abut upon Warham-street, Camberwell New-road, on the application of Mr. H. O. Wilson, on behalf of Mr. H. Buckland.

Camberwell, North.—That consent be given to the erection of a porch with two stories over in front of the proposed South London Art Galleries, Peckham-road, on the site of Nos. 63 and 65, on the application of Mr. M. B. Adams, on behalf of the Commissioners for Public Libraries and Museums for Camberwell.

Dulwich.—That R. J. Bowerman be informed that his application on behalf of Mr. J. H. Myring, for the consent of the Council to the erection of three houses with shops on the north side of Woodwarde-road, Lordship-lane, having been further considered, the Council has resolved to adhere to the decision of March 30, 1896, upon the application.

Dulwich.—That consent be given to the rebuilding of the "Crown" Hotel, High-street, Dulwich, on the application of Messrs. Eedle & Myers, on behalf of Mr. R. J. Brinkley.

Dulwich.—That consent be given to the construction and erection of bay-windows and wooden verandahs to forty-six houses to be erected on the east side of South Croxted-road, West Dulwich, on the application of Mr. E. Van Vliet.

Finsbury, Central.—That the consent of the Council be not given to the wooden rack recently erected for the storage of ladders on the forecourt of No. 7, Pentonville-road, Clerkenwell, on the application of Messrs. Parker & Hazeldine; and that the solicitor do continue the police-court proceedings directed to be taken in the matter.

Fulham.—That consent be given to the construction and erection of two iron sheds at Victoria Wharf, Wandsworth Bridge-road, on the application of Mr. W. H. Tucker, on behalf of Mr. E. H. Johnson.

Fulham.—That consent be not given to the erection of four houses on the north side of Ismalia-road, with the flank of the westernmost house to abut upon Wandsworth Bridge-road, on the application of Mr. M. J. Allen.

Hackney, North.—That consent be not given to the erection of buildings on the north side of Seven Sisters'-road, Stoke Newington, adjoining the "Manor House" public-house, on the further application of Mr. C. J. C. Pawley, on behalf of Mr. J. Swinyard.

Lewisham.—That consent be given to the erection of a wood and glass porch in front of No. 17, Southbrook-road, Burnt-ash-lane, Lee, on the application of Mr. T. Barden, on behalf of Mr. J. S. Wilson.

Marylebone, East.—That consent be given to the erection of a two-story addition upon part of the porch at No. 23, York-terrace, Regent's-park, on the application of Mr. W. T. Farthing, on behalf of Mr. A. Craddock.

Norwood.—That the application of Mr. W. N. Dunn, on behalf of Dr. J. C. Pearce, for an extension of the periods within which the erection of four houses with shops on the west side of Brixton-hill, between No. 74 and Lambeth-road, was required to be commenced and completed, be granted, upon condition that the houses and shops referred to be commenced within eighteen months, and completed within three years from March 30, 1896.

St. Pancras, East.—That consent be given to the erection of a one-story building at the rear of Nos. 4 and 6A, Wrotham-road, to abut upon the east side of King's-road, on the application of Messrs. Thorpe & Furniss, on behalf of Mr. E. Evensen.

Strand.—That consent be given to the erection of a projecting shop-front to No. 56, Rupert-street, St. James's, on the application of Messrs. Chambers & Dewes, on behalf of Mr. L. Azario.

Strand.—That consent be not given to the erection of an outside fire-escape at the third-floor level in front of No. 63, Long-acre, to overhang the public way in Bow-street, on the application of Messrs. Merryweather & Sons, Limited; it being considered that the apparatus may possibly be intended as an advertisement, and in these circumstances obstruction to traffic might be occasioned by the use of the fire-escape for other than its legitimate purpose; and, moreover, the vestry concurs with this view.

Line of Fronts and Width of Way.

St. George, Hanover-square.—That consent be not given to the erection of a one-story addition in front of the coach-house at No. 68, Eaton-mews North, Eaton-place, on the application of Messrs. Sprake, Foreman & Son, on behalf of Mrs. Whitmore.

St. Pancras, North.—That consent be not given to the building recently erected in front of the stabling adjoining No. 1, Oakfield-crescent, Haverstock-road, on the application of Mr. T. S. Inglis, on behalf of Mr. E. Austen.

Height of and Open Space about Buildings.

Whitechapel.—That the Council do, in the exercise of its powers under Sections 13 and 41 of the London Building Act, 1894, consent to and allow the erection of four houses (with shops on the ground floor) to be inhabited or adapted to be inhabited by persons of the working class, on the site of Nos. 2, 3, 4 and 4A, White's-row, Spitalfields, to exceed in height the width of the street, and with an irregular open space at the rear of the house on the site of No. 2, White's-row, on the application of Mr. L. Solomon, on behalf of Mr. A. Davis.

Height of Buildings.

City.—That consent be given to the erection of a warehouse at Nos. 16, 18, and 20, Farringdon-avenue, to exceed in height the width of the street, on the application of Mr. P. B. Tubbs, on behalf of Mr. E. Spurr.

City.—That consent be given to the erection of a Fire Brigade station on the east side of Carmelite-street, Whitefriars, to abut at the rear upon John Carpenter-street, and to exceed in height the distance from the front or external wall on the opposite side of each of the streets upon which the building will abut, on the application of the Fire Brigade Committee of the Council.

Conversion of Building.

Finsbury, Central.—That the Council do, in the exercise of its powers under Sections 41 and 211 of the London Building Act, 1894, allow the conversion of a warehouse at No. 80, Clerkenwell-road, at the corner of St. John-street-road, into a coffee tavern and workmen's hotel, without an open space at the rear, on the further application of Mr. J. Pearce, on behalf of Pearce's Dining and Refreshment Rooms Company, Limited, subject to the following conditions—that the first floor of the building be pugged with concrete; that the staircase be constructed of fire-resisting materials and inclosed on each floor by a brick wall 9 in. thick.

Open Spaces about Buildings.

Chelsea.—That sanction be not given to certain deviations from the plans (certified by the District Surveyor under Section 43 of the London Building Act, 1894), so far as relates to the proposed erection of a block of residential flats on the site of Nos. 10, 10A, 11, 12, 13, and 14, Sloane-terrace, Sloane-square, on the further application of Messrs. Bourchier & Galsworthy, on behalf of Messrs. Hilder & Edge.

Kennington.—That the Council do, in the exercise of its powers under section 41 (1) (iv.) of the London Building Act, 1894, permit the erection of a two-story addition on part of the open space at the rear of a cottage adjoining No. 1, Bolney-street, at the corner of a passage leading to the stables of the "Royal Albert" public-house, on the application of Mr. H. J. Miller, on behalf of Mr. W. H. Fox.

Formation of Streets.

Wandsworth.—That an order be sealed and issued to Mr. J. M. Howard, sanctioning the formation or laying-out of two streets, each 40 ft. wide, for carriage traffic to connect Garratt-lane with Lydden-grove, on his application to the Council, on behalf of Mr. W. Palmer; that the names Lydden-grove (in continuation) and Guelph-street be approved for the new streets.

Dulwich.—That an order be sealed and issued to Mr. P. C. Davies, refusing to sanction the formation

or laying out for carriage traffic of a street, 40 ft wide, to lead out of and return into Croxted-road, Herne Hill, on his application on behalf of Mr. W. J. Hayward.

Clapham.—That an order be sealed and issued to Mr. J. B. Peace, on behalf of Emmanuel College, Cambridge, sanctioning the formation or laying out of a street, 40 ft. wide, for carriage traffic, to lead from Dragmire-lane into Thornton-road, and the widening to 40 ft. of a portion of Dragmire-lane. That the name Hydethorpe-road be approved for the new street.

Greenwich.—That an order be sealed and issued to Mr. J. Rowland, sanctioning the formation or laying out of a street, 40 ft. wide, for carriage traffic, to connect Elliscombe-road with Church-lane, and the widening to 40 ft. of a portion of that lane, on his application to the Council on behalf of Mr. G. D. Byfield. That the name Nadine-street be approved for the new street.

Cubical Extent.

Limehouse.—That, subject to the provisions of Section 76 of the London Building Act, 1894, the consent of the Council be given to the erection at No. 93, High-street, Wapping, of an iron shed addition to the existing bottle warehouses, together exceeding in extent 250,000 but not 450,000 cubic feet, and to be used only for the purposes of the trade of glass-bottle dealers, on the application of Mr. R. Roberts, on behalf of Messrs. Alexander & Co.

Buildings for the Supply of Electricity.

Hampstead.—That the Council do approve of the plans, dated April 23, 1896, for the construction of a boiler-house and engine-room addition to the generating station at the stone-yard, Lithos-road, to abut upon a footpath leading from Finchley-road to West-end-lane, on the application of the Vestry of Hampstead.

Correspondence.

To the Editor of THE BUILDER.

BRICK PIER EXPERIMENTS.

SIR,—In the experiments on the strength of brick piers as illustrated by the Committee at the Royal Institute of British Architects, the structural weakness resulting from the vertical lines of closers in each alternate course of a brick pier was clearly shown and generally recognised. But no suggestions were made by the Committee for a better mode of constructing such piers.

The intelligent bricklayer is duly impressed with the necessity for mechanical neatness and uniformity in the surfaces of his work. If, for breaking bond, he introduce a closer on one side, he must put one to correspond with it on the other; and so on *ad infinitum*. His courses must be uniformly alternated. He must on no account cut in a three-quarter brick in place of a header and closer, lest it should look crooked and cast a slur upon his workmanship. If he fail to keep in every case his customary perpend he is not up to his work. For years we have had constant conflict with the bricklayer who refuses or declines to fill each space with mortar lest he

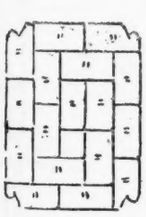


Fig. 1.

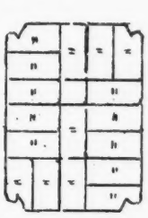


Fig. 2.

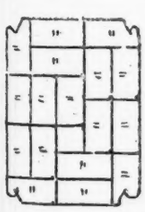


Fig. 3.

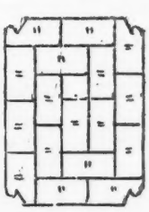


Fig. 4.

should have a wide clumsy joint. Besides, it would only increase his labour to lift so much extra mortar at the needless waste of so much good material.

In like manner the bonding on each side of a pillar must, at any sacrifice of construction, be made uniform in each alternate course, and the only way of making it uniform is with the free use of closers giving only 2¼ inches of lateral tie, and a preponderance of vertical joints in the direct line of vertical pressure.

Now, it is perfectly possible, without any sacrifice of science or of art, to construct a brick pier, say three and a half bricks thick and two and a half bricks wide, with a perfect bond of 4½ in. on every brick and without a single closer. There is a *half* brick to provide for, because such a pier contains on its area seventeen and a half bricks, but this is bonded in above and below in every course.

The diagrams will show the process, which is a purely methodical one. The four courses are again repeated in their successive order. The bond may be called "consecutive" rather than strictly "uniform." The small double marking in the middle of each brick in each course is merely to indicate the bonding of this brick over the corresponding joint in the course below it. It will be seen that there are seventeen of these—a bonding to every brick—and a bonding of 4½ in. in every case, without a single 2¼ in. tie. And instead of alternating the bond in every course, each course has a change of bond for each of the four courses in succession in the order numbered, beginning from the bottom with Fig. 1. Moreover, so far as mere appearance goes, this bonding, and its succession, will be much more effective than the existing fashion. In any case, it will be shortly to be seen in some piers inside the Church of St. Mary-le-Park, Battersea, which will, I hope give a fair illustration of the principle.

WILLIAM WHITE, F.S.A.

*** Mr. White's communication is very interesting, but it does not throw any light on the construction of 18-in. piers, which was the size of those selected for experiment by the Institute Committee.—ED.

THE ROYAL INSURANCE BUILDINGS, LIVERPOOL.

SIR,—My design having been placed second in the above competition, it might be supposed, from Mr. Belcher's letter, that "the expressions of dissatisfaction" which he says have been "widely circulated" with respect to the manner in which it was conducted have been originated in my interests.

May I, therefore, be permitted to state that directly after the decision was made known I, both verbally and in writing, expressed to the manager of the company my belief that everything had been done in a perfectly fair manner.

Since then I have heard absolutely nothing about the competition except that Mr. Norman Shaw, the assessor, has been appointed to act as consulting architect with Mr. Doyle in the same manner that he is now acting in connexion with another large block of buildings in Liverpool. Mr. Belcher knows who gave me that information.

The object of his letter to you is not clear. Mr. Norman Shaw and the directors of the company are all gentlemen perfectly well able to take care of themselves, and need no defence.

ED. W. MOUNTFORD.

The Student's Column.

CARPENTRY AND JOINERY.—XX.

FRAMING.

THE distinctive difference between carpentry and joinery has already been mentioned, but it is well to bear in mind that whereas the strength of the work executed by the carpenter is mainly dependent on the skilful disposition of the various parts, the joiner relies for stability principally on well executed joints.

One of the most essential points to be remembered in designing framing is that alteration in the *length* of the fibres is very small indeed, especially in woods having a straight grain, but that on the other hand, lateral expansion and contraction, *i.e.*, shrinkage across the grain, is very considerable, more especially in soft woods.

In the formation of joints this must be especially taken into consideration and sufficient *play* allowed, as if the pieces are too much confined, defects are bound to arise, as when timber expands it exerts a very considerable force.

Whilst heat causes metals to expand, and cold causes them to contract, the exact reverse is found to be the case with timber, owing to the sap being condensed by the cold, and the heat (of course) acting in an exactly contrary manner reduces the size of the wood, or *stuff* as it is technically called.

As previously explained, in the article on "Joints Used in Carpentry," dovetailed joints should not be used in that trade. But in joinery the shrinkage of the dovetails tends to make the joints fit more closely.

From a consideration of the above remarks it is evident that it is desirable to reduce the wood to narrow pieces, thus distributing its shrinking propensities, and to fix it, where possible, in such a manner as to allow of expansion and contraction.

The subject of framing will be treated under the following heads:—

1. Grounds.
2. Architraves, cornices, friezes, and picture rails.
3. Skirtings and dados.
4. Linings and ceilings.
5. Partitions.
6. Shop fronts.
7. Columns.
8. Fixing and glueing-up.

1. GROUNDS are small pieces of wood nailed to plugs (which are slips of wood driven into the joints of the brickwork) or breeze bricks, so as to form a backing to which the joinery may be attached by nailing or screwing. As nearly all the apparent surfaces in joinery are fixed to grounds, and as their accuracy must depend upon the true fixing of these grounds, it is obvious that the latter require more care and attention than is usually bestowed upon them, and that their faces and edges should be fixed in true vertical and horizontal planes. Their thickness should be equal to the lathing and plastering of a partition (or the rendering, floating, and setting coats of plaster on a brick wall), so that when the latter is completed they may be in the same plane, and their edge towards the plastering should be splayed so as to form a key for the latter, which should be accurately worked up to this edge, which thus forms a solid finish (see fig. 323).

Grounds are left rough when they are covered by an architrave; on the other hand, when any part of their surface is exposed to view, that part is wrought, and generally has a moulding worked on it.

Framed grounds are used in openings for the better class of work, and form a rough kind of frame, with two upright posts mortised and tenoned into the head, though this junction is sometimes formed by simply notching or halving. Grounds should always be fixed in position before the plastering is commenced, as they thus form a "screed" or guide for the plasterer.

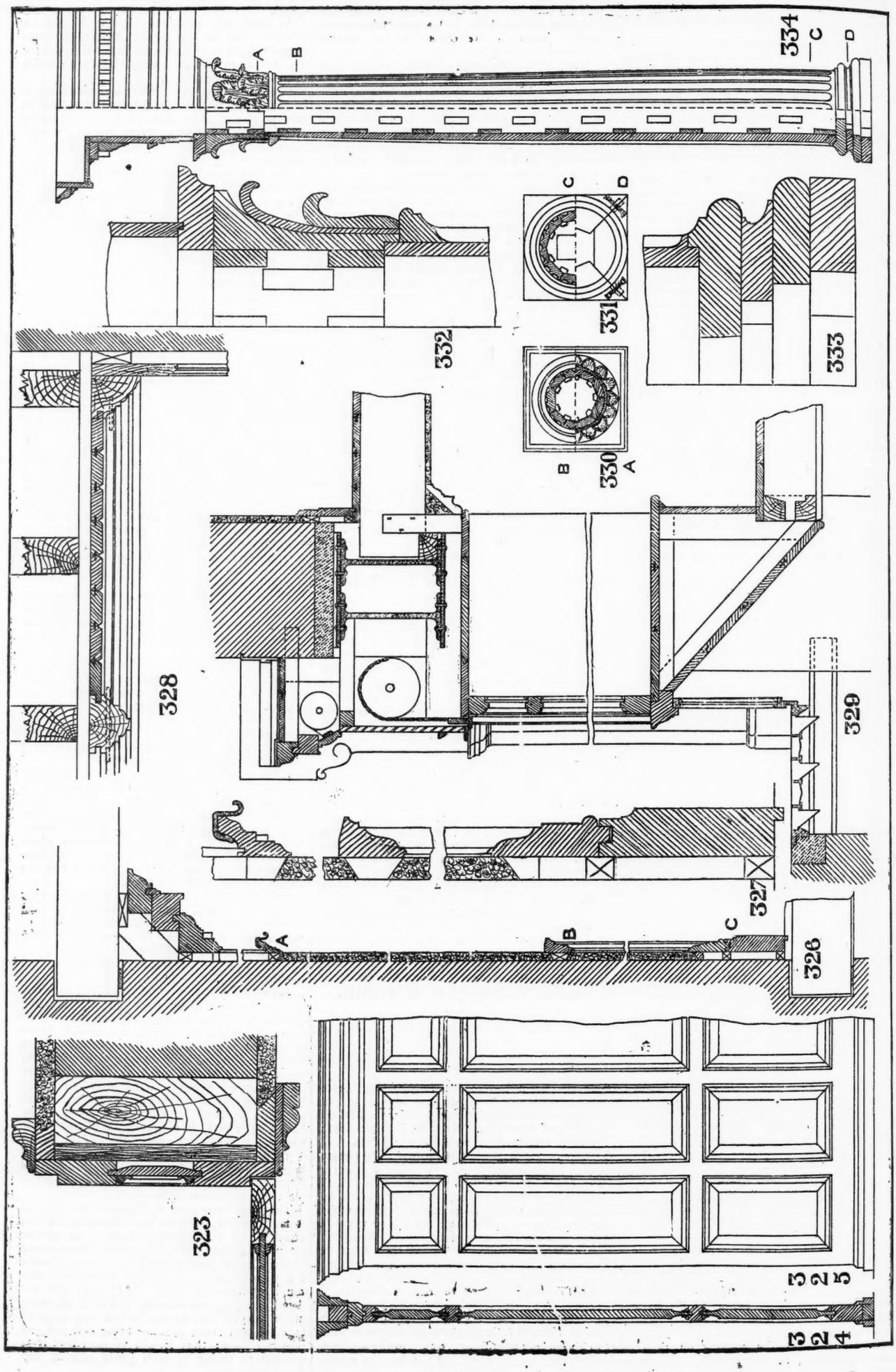
2. ARCHITRAVES, see fig. 323, are wrought borders, generally moulded and fixed round the openings of doors and windows to hide the joint between the *ground* and the plastering, and sometimes that between the ground and the lining. Architraves are often built up in two parts, glued together as shown in the above-mentioned figure, the base being merely a beaded board and the outer width moulded as desired.

Cornices are always better when framed together in lengths of small rectangular sections tongued together, though they are often made out of boards fixed at the rake of the cornice. They are fixed to grounds as shown in the upper part of fig. 326, having been previously glued and blocked together.

Friezes are not, as a rule, framed in themselves, but are tongued along their top edge into the cornice, as shown in fig. 326, and along their lower edge into the picture rail, which latter generally has a groove on its upper surface into which the brass picture hooks fit, as shown at A, fig. 326, and in detail, fig. 372. In an ordinary room they are generally fixed about 1 ft. 3 in. below the cornice when there is no frieze, and should be attached to grounds, as shown. The height at which they should be placed is, of course, regulated by the proportions of the room.

3. SKIRTINGS are intended to cover the junction of the floor with the walls to protect the latter and to form a framing behind which the plastering may be secured.

They may be secured to plugs in the wall, but it is better to fix them to grounds when not attached to any joinery above. A narrow horizontal ground runs along behind the skirting near its upper part, to which the latter is fixed; it is also secured to a small fillet which is carried round the floor at its base. At C in fig. 326, and detail fig. 327, the skirting is shown as being made up in two pieces, which are tongued together, the lower member being also tongued into the floor; thus it will be seen that it is enabled to shrink at both joints without any fissure being seen.



Illustrations to Student's Column: Chapter XX.—Drawing.

Dados generally consist of panelled framing and may either be carried right down to the floor and be fixed against grounds in the wall at the base and have a skirting attached in front, or they may be fixed as shown in fig. 326. In this case the dado is tongued on to the skirting and fixed at this point to a ground, the skirting being in two pieces. It will be seen that the grounds form a frame behind the dado, to which it is secured.

The top rail of the dado has a capping which conceals the junction of the plaster with the topmost ground.

4. LININGS are generally used to conceal some portion of the construction of doors or windows.

Jamb linings (see fig. 323) are those which are used in the vertical thickness of the wall (see figs. 294, 295, article xviii.).

Soffit linings carry out the same purpose in horizontal thickness (see fig. 295, article xviii.).

Window backs (see figs. 304, 305, article xix.) are those linings fixed between the skirting and the underside of the window board.

Elbow linings are those that cover the splay in the wall between the sash frame and the return of the wall (see fig. 306, article xix.).

Linings should be fixed as shown in the illustrations against grounds plugged to the walls, and placed usually about 2 ft. apart.

Ceilings are finished in wood in a variety of ways, the simplest of which is matchboarding nailed to the joists. Another method (fig. 328) frequently adopted in mediæval times, is to divide up the ceiling into a number of bays by moulded ribs placed in a parallel direction and attached to the joists above. These spaces are further divided into panels by transverse ribs, the edges of all being ploughed to receive the panelling, which, of course, is fixed in position first.

Coffered Ceilings, see fig. 328, are formed by carrying the upper members of the cornice across the ceiling as ribs secured to grounds attached to the joists, the panel resting on the upper members of the rib; the intersection of the ribs is often covered by a carved boss, the panels themselves being frequently painted or carved.

5. PARTITIONS IN JOINERY are generally from 1½ in. to 3 in. in thickness, wrought, ploughed, tongued, and panelled in various ways. Figs. 324, 325 illustrates a common form. This partition is secured at both of its vertical extremities. It will also be observed that it rests on a small sill, which is fixed to the floor, and that this joint is concealed by a narrow skirting. The framing throughout is of the same thickness, and the raised panels which are tongued into it are allowed to contract or expand at the joints in the same way as in the framing of a door, care being taken to fix the moulding to the framing and not to the panels. The cornice is fixed to the top rail, and is generally of the same section as the plaster cornice of the room.

6. SHOP FRONTS vary very much according to the taste and discretion of the architect, but fig. 329 gives a fair idea of the method usually employed. The cornice is framed up as before described except that part of it generally comes away with the sun-blind as shown, and it resumes its position as part of the cornice when the blind is rolled up. A revolving shutter, which is composed of narrow strips of wood connected by hinged joints, is shown just below the sun-blind and behind the fascia. A continuous iron ventilating grating is shown above the sash, which is very necessary to prevent the condensation of the atmosphere against the glass, which would prevent the goods or articles on the stall-board being seen. This latter is too frequently neglected, sometimes no ventilation being provided at all, and at other times not an adequate quantity. The bottom of the sash is generally fixed just above the stall-board and a sill below this carries the whole sash between the supports and enables a bulk-head framing to be used, so that light may be obtained below. This is further assisted by the pavement lights.

7. COLUMNS.—Columns are framed together as illustrated in fig. 334, which is a section through an entablature and column with its base. Fig. 333 shows the method of framing up the base, the rectangular member being formed by mitreing together four pieces of "stuff" of equal length, which are secured by screws and glue, and are strengthened by blocks at the angles; when this has been done, the upper surface is truly planed, and the next course planted on and planed true, and so on until all the courses of the base are in position. When the block is completed, it is turned as required and rebated to receive the shaft. The latter is made of thin pieces of stuff, not more than 4 in. or 5 in. wide; these are jointed against wooden blocks as indicated, which should be placed in the centre of the joint. The pieces composing the shaft should if possible be made to the proper entasis before fixing. The framing of the capital (fig. 332) and the entablature (fig. 334) is sufficiently demonstrated, though very often these are made of thinner material, which is strengthened by wedges or blocks of wood glued at the internal joints (figs. 330 and 331 show plans at A, B, C, and D.

8. FIXING AND GLUEING UP are very important points which must receive the careful attention of the joiner. In panelling it is generally found that wood of sufficient width cannot be obtained, more especially as no shakes or imperfections whatsoever should be allowed in the wood for the panels. If possible, the joints between the stuff forming the panel should be feather-tongued, so that if there is a shrinkage the light will not show through.

When plane surfaces have to be jointed, they should first be glued, and then, when dry, *keyed* at the back by the insertion of dovetail keys being fitted into similar or corresponding grooves across the joint.

Where great width is required, wide planks should not be used, but should be sawn up in pieces not more than 4 in. wide; these should be glued together with the edge which grew nearest to the heart of the tree adjoining another furthest from it. Glued joints are often stronger than the wood itself, and their strength is not in proportion to the quantity but the quality of the glue.

When two pieces of wood are required to be jointed together to form a panel, &c., their edges should be carefully shot and then dried, after which they should be forced together so as to exclude all superfluous glutinous material. It should be remembered that when pieces of wood are joined end to end they absorb more glue than when their horizontal fibres adjoin each other, though in the latter case a better joint is made. In the case of veneering care should be taken to swell out the body of the material to be veneered with size, and thus, the veneer and the body being both swelled out, curling is obviated.

Illustrations to Student's Column.

CHAPTER XX.—FRAMING.

323. Fixing of grounds, architraves, and jamb linings.
324. Section of framed partition.
325. Elevation of framed partition.
326. Fixing of cornice, picture rail, chair rail, and skirting.
327. Details at A, B, C, fig. 326.
328. Panelled ceiling.
329. Section of a shop front.
330. Plans at A and B.
331. Plans at C and D.
332. Detail of glueing up of capital, fig. 334.
333. Detail of glueing up of base, fig. 334.
334. Half elevation and half section of column and entablature.

OBITUARY.

M. E. J. N. STENT. — Mr. E. J. Neville Stent, an architect and designer well known to the older generation of New York architects, died recently at his home in New Jersey. Mr. Stent was an Englishman, but had lived in New York for many years. He received his professional training at a time when many English architects were devoting themselves enthusiastically to the study of coloured decoration, and he became widely known in New York as an expert designer and decorative colourist, as well as a skilful architect, particularly in ecclesiastical work. A large part of his professional work was done as a valued assistant to other architects, but, if we are not mistaken, he designed some important mercantile and other buildings for the Astor estate, and of late years had practised extensively as a church architect.—*American Architect.*

THE LATE M. LUMINAIS. — The eminent French painter Evariste Luminais has just died at the age of 75. He was one of the last representatives of the romantic school of French painters, of whom Delacroix was the acknowledged head. Born at Nantes in 1821, he became a pupil of Cogniet and of Troyon. His first important pictures, "Une Scène de Guerre Civile en Bretagne," and "Un Intérieur d'Écurie," figured in the Salon of 1843, and from that date up to the present year his pictures have been in every annual Salon. Among his principal works may be named "Déroute des Germains après la Bataille de Tolbiac" (in the Museum at Nantes); "Retour de Chasse dans les Gaules;" "Brunehaut" (in the Salon of 1874); "Une Chasse sous Dagobert" and "Cavaliers Gaulois en fuite" (Salon of 1878); and "Les Enervés de Jumiège" (Salon of 1880), a very clever picture of a cruel and revolting subject, which was exhibited in London at Mr. Wallis's gallery, where it excited admiration mingled with a good deal of disgust. Subsequently to his early studies already referred to, Luminais worked under Maignan, and was considered to be a follower of his, and one of his best pupils. He had received medals in various Salons, a gold medal in the 1889 Exhibition, and was created in 1894 "Officier" of the Legion of Honour. His death is considered in France, and with justice, to be a serious loss to French art.

GENERAL BUILDING NEWS.

CLOTHING FACTORY, LEEDS.—A new clothing factory has been erected for Messrs. W. Blackburn & Co., at Holbeck. The building, which has been erected from designs by Mr. Archibald Neill, stands on what were formerly gardens abutting on Springwell-road, near to its junction with Whitehall-road.

PUBLIC BATHS, CARDIFF.—New Corporation baths were recently opened in Guildford-street, Cardiff. The plans were prepared by Mr. W. Harpur, Borough Engineer, and the contract has been carried out by Mr. W. Symonds.

BAPTIST CHAPEL, SOUTH BERMONDSEY.—A new Baptist chapel has just been erected in Ilderton-road, South Bermondsey. The internal dimensions are:—width 49 ft., length 59 ft., including two front entrance lobbies to the ground floor, and two side entrances. There are galleries on three sides of the chapel, the total seating accommodation being over 700. The roof is in three spans, the central one being carried up higher than the sides, with clerestory windows. The front has two arched doorways, surmounted by stone moulded pediments, and flanked by two pilasters, carried up as pinnacles on either side of the central gable. This has a two-light, stone tracery window in centre, with a single light on each side. It is flanked by staircase wings, having return gables at sides. Each of the gables has moulded brick cornices, finished with stone coping. The builders were Messrs. Battley, Sons, and Holness, and the architect Mr. G. Paines, of Great Winchester-street.

RESTORATION OF GARWAY CHURCH, HEREFORDSHIRE. — The ancient parish church, St. Michael's, Garway, having fallen into a dilapidated condition, tenders for carrying out a restoration of a portion of the work have been accepted and the work has been commenced. It includes the repair of the walls of the nave, chancel, and Knight Templars' Chapel, the stripping and relaying of the roofs, and a portion of the ceiling over the nave having already fallen is also to receive attention. The old tower (detached from the church) still remains to be done, and requires immediate attention. The whole of the work is being carried out by Mr. Ernest Davies, of Hereford.

CHURCH, BRECHIN, FORFARSHIRE.—At a recent meeting of the Established Presbytery of Brechin, the plans of the proposed new church, to be erected on the vacant ground fronting St. Ninian's-square and Damacre-road, were submitted. The church will have a massive tower at the south-east corner. The main entrance will be from St. Ninian's-square, but there will also be an entrance from Damacre-road. In the nave and choir there will be sittings for 378, and in the aisle for 340—making a total of 718; but there will be in addition thirty-two stalls and a morning chapel capable of accommodating fifty-six people. The chancel will be underneath the tower at the east end, and north from that and facing St. Ninian's-square will be vestry, waiting-rooms, &c., and a large hall, with a corridor behind the rooms and communicating between the church and the hall. There will also be room for a gallery at the west end, but meantime that part of the building is intended for the choir and the organ. The architect is Mr. J. J. Burnett, Glasgow.

CHURCH, CHERRYHINTON, CAMBRIDGE. — The foundation-stone of the church of St. John-the-Evangelist, Hills-road, Cambridge, was laid recently by Lady Alwyne Compton. The total cost of the building now commenced (that is the chancel and a portion of the nave) will represent an outlay of 2,350*l.* About two-thirds of the nave will be built at present, and this and the chancel will seat about 350 persons. At some future period the nave is to be completed, and two vestries, an organ-chamber, and a spire will be added. There will then be seating accommodation for 600 persons. The new structure is being built of red brick with freestone facings. The style is Early English. The architects are Messrs. Gordon, Lowther, & Gunton, Cambridge, and the builder Mr. W. Saint, of Cambridge.

NEW BUILDINGS, WEST RIDING ASYLUMS.—At a recent meeting of the West Riding County Council, Colonel Spencer Stanhope, C.B., presented to the Council the report of the General Asylums Committee, in which was included the estimate for the new Acute Hospital, amounting to 76,869*l.* Acting on the instructions of the Committee, the West Riding Surveyor, Mr. J. Vickers Edwards, had prepared plans and a provisional estimate for the proposed hospital. That estimate amounted to 76,869*l.*, and included the administrative block, medical director's house, Turkish bath, the various wards, reading and recreation rooms for attendants and nurses, and their respective bedroom accommodation; also a mortuary and post-mortem room, lodge and entrance gates, drainage and main outfall, the brick boundary wall to the public roads, walls to the airing courts, laying out the grounds, asphalting the walks and paving the yards, construction of the main approach road to the institution, and the back

approach road, the main steam supply from the boilers to the new block, including brick tunnel; also provision for electric light. The area of land occupied by the buildings, airing courts and back courts, roads, &c., was about 15 acres. It was ultimately agreed: — "That the West Riding Asylums Committee be directed and empowered to erect and provide an Acute Hospital and outbuildings at Wakefield Asylum, in general accordance with the plans approved by the General Asylums Committee and now submitted to the County Council at an estimated cost of 73,869*l*."

FREE CHURCH, GORGIE, EDINBURGH.—On the 14th inst. the new church of the Free denomination at Gorgie was opened by the Rev. Dr. J. H. Wilson. Erected from plans prepared by Messrs. M'Arthy & Watson, at a cost of some 4,500*l*., the structure is a parallelogram in plan, divided by stone arcades into a nave and aisles, lying north and south, with a gallery at the north end. The front of the church faces Slateford-road, and the nave terminates at the other end in a semi-octagon, in which is a rostrum with a projecting pulpit, and a platform for the choir. The internal dimensions are 88 ft. long by 50 ft. wide, and 41 ft. high to the apex of the ceiling. The roof is built of steel, and internally forms a pointed barrel vault, lined with wood, and divided into bays by moulded wood ribs. The church has been decorated by Mr. James Clark. Accommodation is provided for 750 worshippers.

COUNTY BUILDINGS, BLYTH.—New County Buildings in Northumberland-stre et Blyth, have just been opened. The building is built of bricks, three stories high, with stone facings carved and interspersed with terra-cotta ornamentation. The frontage in Northumberland-street is 219 ft., and in Carlton-street 148 ft. The main entrance is situated in Northumberland-street; it has polished granite pillars rising on either side, and surmounted by carved capitals, which support two figures of chained bull-dogs. High over the doorway is a carved representation of the arms and motto of the Northumberland County Council. The building is roofed with green Buttermere slates. The contract price for the work is 12,000*l*., and it has been carried out by Mr. S. D. Burton, of Newcastle, from the plans and specifications of the County Architect, Mr. John Cresswell. Mr. Thomas Davison, of Cramlington, supervised the details as clerk of works.

CHURCH, EXMOUTH.—The Bishop of Exeter recently laid the foundation-stone of All Saints' Church, Exmouth, which is being erected in Exeter-road. The new church, which will seat 700 persons, is planned with aisles on either side of the nave, transepts, a morning chapel to the south of the chancel, and occupying the base of the tower a baptistry with vestries for the choir and clergy, and an organ chamber. The cost of the building, exclusive of tower and fittings, will be about 7,000*l*. The architect is Mr. Tait.

CHRIST CHURCH, NORTH BRIXTON.—The designs by Mr. Beresford Pite for rebuilding Christ Church, North Brixton, have been approved.

WESLEYAN CHAPEL, ASHOPTON, DERBYSHIRE.—The plans have been accepted of a new chapel at Ashopton, prepared by Mr. Herbert W. Lockwood, of Sheffield. The new chapel is to be erected longside the present building and at right angles to it. The end wall of the present building is to be taken out and a sliding partition substituted. The new building, which seats about 100 people, is to be built of rock-faced stone with aslar dressings. The style is late Gothic. In the gable towards the Sheffield-road is a three-light terraced window to be filled in with stained glass. The internal fittings are to be of pitch pine, stained and varnished. On the lower story, being on a level with the lower road, are class-rooms, kitchen, cloak-rooms, lavatory,

OFFICES, ABERDEEN. — The Aberdeen School Board has resolved to build new offices in Union-terrace, according to designs by Mr. A. Marshall Mackenzie. The building, which will be in the Italian Renaissance style, will have a frontage of 50 ft. to the terrace, and will cost £5,000.

PROPOSED HOTEL METROPOLE, SOUTHEND.—It is proposed to erect at Southend-on-Sea a large hotel, on the hill above the pier entrance. It has been designed by Messrs. James Thompson & Greenhalgh, architects, of High-street, Southend. There will be two principal entrances—one at the west end of the building and the other on the north front—and both will lead to the grand hall. The lower ground floor will be occupied with kitchens and other offices, with vapour and Turkish baths, and a large room to be used for any purpose. On this floor also there will be a dining-room for day visitors and a restaurant. The ground-floor will contain billiard, reading, and commercial rooms, and the grand hall; while along a colonnade there will be a number of shops. The first floor will contain the ladies' coffee-room, the grand drawing-room, the principal dining hall, and a spacious banqueting hall, with a gallery for an orchestra, and each of these halls will open on to a conservatory. The other larger rooms will also open into an extensive conservatory, which will extend along the whole of the south front of the building. This floor will also contain the retiring rooms and offices connected with the larger halls. The second and third floors will be devoted to private sitting and bed rooms, opening on to balconies on the south front. The fourth and fifth floors will contain bedrooms principally, and also a few private sitting-rooms. The roof of the building is to be laid out as a promenade, a portion of which promenade will be allotted to day visitors, and will be approached by a tower at the south-west angle, in which there will be a hydraulic lift. The part for hotel visitors will be reached by a passenger lift, starting from the lower ground floor, and may be entered from any floor in the building. Provision is made for lighting throughout by electricity, with probably a powerful search light from one of the towers. The estimated cost of the building is 53,878*l*.

THE "HANS PLACE HOTEL."—This new hotel, which opens to the public this week, is situated within a few minutes' walk of Hyde Park in Hans-crescent, close to the Park end of Sloane-street, and backing on to Hans-place. The building has been erected by Messrs. Stephens, Bastow, & Co., Limited, contractors, of Bristol, from the designs and under the superintendence of Messrs. Read & Macdonald, architects, of London. The external elevations, which are kept very plain, are of red brick with Portland stone strings and cornice. The porch is also of stone. The roofs are of red tile. The hall and main staircase is panelled and arcaded in ammonia-fumed oak, the actual stairs being of concrete. The floors of all the corridors, and the whole of the ground floor and all staircases, are of fireproof construction. The plan of the building being in the form of three sides of a quadrangle, opportunity has been afforded of erecting an attractive feature in the form of a large palmery or winter-garden of iron and glass. Self-contained independent suites of apartments form a feature of the planning. The electric lighting has been carried out by Messrs. Strode & Co., under the direction and superintendence of Messrs. Kincaid, Waller, & Manville, consulting engineers. The following are some of the various contractors who have done special works:—Lifts by Messrs. Waygood & Co; fire hydrants, Messrs. Merryweather & Co.; heating and plumbing, Messrs. Wenham & Waters; the palmery, Messrs. Handyside & Co.; palmery glazing, Messrs. Rendle & Co.; cooking apparatus, Messrs. Benham & Sons. The drainage has been approved and tested by the London Sanitary Protection Association. The decoration of the interior has been carried out by Messrs S. J. Waring & Sons. Among the details of the decoration may be mentioned a tapestry panel on the first landing, representing the old town of Chelsey in 1765, from prints of the period, the ceiling being a replica of old plaster work of the same period. The library is arranged as an "old English" reading-room, containing copies of Chippendale furniture. The banqueting-room is panelled in white and gold, and the walls hung with old-fashioned silk moire of a delicate blue. The billiard and smoking rooms are panelled in fumed oak, surmounted by a frieze in which the decorative effect of old Spanish leather is reproduced. The drawing-room is in the best style of Louis XVI., the panels and mouldings are of white, ornamented, the pilasters being filled in with a beautiful old broche. The plaster frieze is a reproduction of one in a château in the South of France, from which the decorative *motif* has been obtained. The dining-room is treated with high panelling of pollard oak, with a decorative embossed frieze and a ceiling of fibrous plaster. The numerous sitting-rooms, bedrooms, &c., are decorated and furnished in various styles—English, Flemish, and French Renaissance; there are also reproductions of the Sheraton and Chippendale periods of decoration and fitting.

SANITARY AND ENGINEERING NEWS.

NEW BRIDGE OVER THE DERWENT.—On the 13th inst. the new carriage bridge which has been erected across the River Derwent at Blackhall Mill, situate between Ebchester and Lintz Green, was opened to the public. The structure, which has cost about 1,800*l*., has been built according to designs prepared by Mr. Fowler, architect, of Wolsingham, the contractor being Mr. Hilton, Bishop Auckland.

SEWERAGE SCHEME, KING'S NORTON.—On the 13th inst., Colonel A. G. Durnford, R.E., one of the Local Government Board inspectors, held an inquiry at the Saracen's Head, King's Norton, into an application made by the Rural District Council of King's Norton for sanction to borrow 4,850*l*. for purposes of sewerage and sewage disposal for the parish. Mr. Godfrey, the Surveyor, gave particulars of the details of the scheme, and in reply to a question said that he was not aware that any manufacturers at the present time discharged the effluent from their manufactories into the sewers. There was no provision in the scheme for receiving this effluent in the future. The trade effluent went into the river. He was of opinion that the sewers were of sufficient capacity to take the effluent from Messrs. Baldwin's works supposing it was purified in accordance with the Rivers Pollution Prevention Act. Mr. Clarke said that the County Council and the Birmingham Corporation had brought pressure to bear on Messrs. Baldwin to prevent them sending their effluent into the river, and the District Council had obtained an injunction against the firm. Messrs. Baldwin contended that under Section 15 of the Public Health Act, and Section 7 of the Rivers Pollution Act 1876, the Council ought to take their trade effluent into the sewers, and they asked the Local Government Board not to sanction the loans because the scheme was insufficient. Mr. Clarke said that Messrs. Baldwin were prepared to give an undertaking that the effluent should not go into the sewers until the provisions of the Act had been conformed to.

RESERVOIR, NEATH.—The ceremony of cutting the first sod of the new reservoir at Moss House Wood, Neath, was recently performed. In 1893 plans were prepared by Mr. W. M. Jenkins, Borough Surveyor, and in 1894 the sanction of Parliament was obtained. In February, 1896, the contract was given to Mr. James Allen, of Cardiff, who is carrying on the work. The contract price was 12,285*l*.

SEWAGE DISPOSAL WORKS, BLACKHALL MILL, DURHAM.—On the 13th inst. the new Cronniwell sewage disposal works, which have been constructed by the Blaydon and Lanchester District Councils, jointly, were opened. Two years ago, sewers were laid by the Lanchester Rural Authority for the drainage of the villages of Cronniwell, High Westwood, part of Allendale Cottages, Low Westwood, Derwentside, and works are now being constructed for the drainage of Blackhall Mill. As the sewage of the last-named place passes under the River Derwent, it was found necessary to raise it to the sewage disposal works, and an arrangement, it is stated, the invention of the Adam's Patent Sewage Lift Company, York, had been introduced, by means of which the sewage from the high-level sewers is utilised as a motive power for the low-level (or Blackhall Mill) sewer. The sewerage works are situate within 100 yards of the new county bridge. They comprise a store-house and mixing-tank, sand-washer, two perpendicular tanks, and filters in four separate compartments, one sludge-tank and lift to raise the sludge, a height of about 10 ft., when it then discharges on to the sludge drying-beds. The scheme has been carried out by Mr. G. H. Bell, contractor, of Bishop Auckland, under the personal supervision of Mr. J. E. Parker, Surveyor and Inspector.

SANITARY CONDITION OF BETHNAL-GREEN.—In January last the Vestry of Bethnal-green, after considering Dr. Young's report upon the sanitary condition and administration of the parish, decided to appoint one of its present sanitary inspectors to be chief sanitary inspector, and to engage an additional sanitary inspector and an additional clerk in the sanitary office. From a recent report made by the Vestry, it appears that the whole work of the sanitary department has been reorganised, and that a systematic house-to-house inspection of the parish has been instituted.

LOCAL SEWERS, LONDON.—The London County Council has sanctioned, subject to a condition recommended by the engineer, the construction of local sewers, as follows:—Camberwell, 900 ft. of 12-in. pipe sewer in Winterbrook-road, Springfield Estate, Half Moon-lane. Hampstead, 340 ft. of 12-in. pipe and concrete sewer in Alexandra-road and Loudoun-road. Lee, 600 ft. of 9-in. pipe sewer in Elliscombe Gardens, Elliscombe Park Estate, Church-lane, Charlton. Wandsworth 1,295 ft. of 12-in. pipe and concrete sewer in Broadwater-road; 170 ft. of 9-in. ditto in Edward-street; 400 ft. of 15-in. ditto in John-street; and 1,255 ft. of 12-in. ditto in Manor-road, Manor House Estate, Upper Tooting-road. Hackney 265 ft. of 9-in. pipe sewer in Norfolk-road. Islington, 180 ft. of 9-in. pipe and concrete sewer in Thomas-street, Archway-road. St. Marylebone, 995 ft. of under-pinning of sewer in Cavendish-road West, Lord's Cricket Ground, and Wellington-place.

BLACKWALL TUNNEL.—The following works are finished at the Blackwall Tunnel, namely—the sewers on both sides of the river, the fire-proof fence at and the approach-road to Ordnance-wharf and the Northumberland wharf river wall. With the exception of the internal glazed brick lining all the shafts are completed. During the past month, thirteen cast-iron rings, equivalent to a distance of 32 ft. 6 in., were erected, thus finishing the length of tunnel between shafts Nos. 2 and 1. The shield is now in shaft No. 1, and the preparations for proceeding northward in the last section, between this shaft and the cut and cover, are well advanced. On the Poplar side of the river, out of a total length of 436 ft. of cut and cover, a distance of 427 ft. is finished, and on the south side the whole of this description of work is executed. A commencement has been made with the concrete foundation for the roadway of the open approaches on both sides of the Thames. At Robin Hood-lane a great deal of work was done during the past month in getting in the concrete foundation and forming new kerbing and channelling. A large quantity of granite setts and York paving also arrived on the ground. The construction of the entrance arches to the tunnel is being proceeded with. As estimated, the total value of the work executed, including the formation of the approach roads under the contract, is 618,908*l*., of which the sum of 5,026*l*. represents the progress made in April last.

FOREIGN.

FRANCE.—M. Henri Cernuschi who has just died has bequeathed to the City of Paris his house in the Parc Morceau, with a fine collection of Chinese and Japanese curiosities. It will be called the "Musée Cernuschi."——The Geographical Society has given the legacy of Léon Poirier to M. Lucien Fournereau in recognition of the important services that he has rendered to Science in his explorations in Indo-China. ——A fine Gothic church is to be built on the Boulevard Ménilmontant in place of the little chapel of *Notre Dame du perpétuel secours*.——The Company of the Chemin-de-Fer du Nord have commenced the works for a new station for the Ceinture trains. It is in the Faubourg St. Denis, and on the Rue de Dunkerque.——M. Falguière has finished his model of the monument to Ambroise Thomas. The figure of the composer is seated on a rock, and at his feet is a statue of Ophelia offering him flowers.——There is an interesting exhibition of photographs in the Champs Elysées. It is organised by the Photo. Club. The English exhibits deserve special mention.——The Committee appointed to consider the project of making a canal to unite the two seas, has published a most unfavourable report. The Committee consider that the making of this immense canal (from the Mediterranean to the Atlantic Ocean) will cause a great disturbance in the country, will do little good to general navigation, and that the receipts will not cover the expenses of working, which are estimated at the sum of three thousand million francs.——M. Le Prêtre, architect, has been commissioned to make plans for, and carry out the building of two Consumptive Hospitals, one at Ardes-sur-Couze (Puy de Dôm), and one near Nice.——Thirty-two architects have taken part in the open competition for the building of Barracks for firemen, to be erected at Montmartre, and in Rue Carpeaux, Rue Lamarck, and at Grandes Carrières. The award will be given next week. Amongst the names are those of MM. Roussi, Courtois-Suffit, Héneux, Delaire, André, and Chédanne.——The deaths of two Paris architects are announced—M. Albert Duclos and M. Elie Beaudoin.

MISCELLANEOUS.

HILLY FIELDS, BROCKLEY.—On Saturday last Sir Arthur Arnold, Chairman of the London County Council, dedicated to the public use for ever the grounds at Hilly Fields, Brockley. The total cost of acquisition has been 44,872*l.*, of which sum the County Council contributed 23,572*l.*, the remainder of the purchase-money being received from the trustees of the London Parochial and Lewisham Parochial Charities, the Kyrle Society, the Greenwich and Lewisham District Boards, the City Companies, and private sources. The sum spent in laying out the grounds was 4 685*l.*

THE '91 ART CLUB.—This club will hold their annual exhibition of members' works at Clifford's Gallery, 21, Haymarket, early in June.

PROFESSIONAL AND BUSINESS NOTICES.—Mr. T. A. Morris, F.R.I.B.A., asks us to mention that owing to dissolution of partnership his temporary address will be at 38, Newmarket-street, Ayr, until the completion of Wellington Chambers in the same town.——The business of Mr. Bradshaw Brown, auctioneer, of Billiter-square-buildings and Millwall, will in future be carried on by Mr. Harry Hooper (the late Mr. Bradshaw Brown's senior partner in Millwall business) and Mr. Thomas W. Price, F.S.I., under the name "Bradshaw Brown, Hooper, & Price."

EXAMINATIONS IN CARPENTRY AND JOINERY.—In another column will be found the announcement of the Carpenters' Company's annual examination in carpentry and joinery. The series of lectures which is delivered, primarily, to intending candidates is now over, and the attendance has been very good. Professors Banister Fletcher and T. Roger Smith were among the lecturers. The Company has been fortunate in also securing these gentlemen to act as two of the examiners. The Carpenters' Company has invited, further, the Presidents of the R.I.B.A., of the Institution of Civil Engineers, of the Architectural Association, &c., to join the examining board. Entries for the examination, we are informed, already exceed those of most previous years, and that candidates are by no means confined to London and the neighbourhood.

FARMHOUSE, SEASIDE, AND COUNTRY LODGINGS.—The Great Western Railway Company have issued an illustrated pamphlet, containing lists of farmhouses, seaside and country lodgings, hotels, and boarding houses in the districts served by the Great Western line, including Jersey and Guernsey. The pamphlet shows the accommodation obtainable, and the features of interest in the various localities. Copies can be obtained free on personal application at the Company's London Receiving Offices, and at Paddington Station and the principal stations throughout the line. The pamphlet is published by Messrs. Walter Hill & Co., of Southampton-row, London.

SUMMER TOURS IN SCOTLAND.—Messrs. David MacBrayne (Glasgow) send us an illustrated handbook of summer tours in Scotland, on the lines of route taken by their steamers, by way of Oban, the Caledonian Canal, &c. The handbook contains a great deal of information as to the places and districts included.

CAPITAL AND LABOUR.

THE LONDON BUILDING TRADE STRIKE.—The response of the carpenters to the instructions given on Friday last week was complete and decisive. On the 18th inst. the men tendered one hour's notice at breakfast-time, and in all cases left their work where their terms were not conceded. This applies equally to union and non-union men. On the 18th inst. Mr. Chandler, the secretary of the Amalgamated Society of Carpenters and Joiners, came up from Manchester, and Mr. William Matkin, the secretary of the General Union of Carpenters and Joiners, came up from Liverpool, for the purpose of conferring with the leaders of the London men. It was soon apparent that conciliation was in the air, for another conference with the master builders was arranged during the day, and at six o'clock in the evening the representatives of the four societies of carpenters met the Trade Questions Committee of the Central Association of Master Builders, under the presidency of Mr. Holloway. The conference lasted until half-past nine p.m., and although no decision was arrived at, Mr. Henry Holloway reported that the proceedings had been of a conciliatory character. The builders offered the ½d. per hour advance in wages, to come into force immediately the men returned to work. The only difficulty was with the now-celebrated disability clause. The carpenters at first refused to sign it; but it was pointed out that a settlement had been come to with three unions—the Plumbers', the Bricklayers', and the Smiths and Fitters'. Eventually a modified form of the rule was offered by the builders, which will be submitted to the men by ballot, and the conference was adjourned until Friday, pending this ballot being taken. There were two other conferences on the 18th. The smiths and fitters met the master builders and came to terms on the basis of an advance in wages in August of ½d. per hour, and a code of rules similar to that signed by the bricklayers. The painters also met the master builders, and certain bases of agreement were arrived at which are to be submitted to the men for their consideration. As to the labourers, they are still out, and at present there seems no probability of a settlement. The plasterers are drafting what men they have out on strike into the country as fast as they can.—The following letter was on the 20th inst. received by the members of the Masters' Association:—"The Central Association of Master Builders of London, 31 and 32, Bedford-street, Strand, W.C., London, May 19, 1896.—Dear Sir,—I am instructed by the Standing Committee on trade questions to inform you that negotiations are still pending with the carpenters, joiners, and painters for a settlement of the questions in dispute. The plasterers and labourers have rejected the committee's proposals. I have again to remind you that no increase of wages to these trades is to take place until a settlement has been arrived at and the rules signed. A further conference with the representatives of the carpenters and joiners took place yesterday (Monday). The negotiations are proceeding in a most conciliatory manner, and it is hoped a settlement will be arrived at by the end of the week. The trades with whom the committee have now settled a code of rules are:—Bricklayers, plumbers, and smiths and fitters. The increase in wages with the two latter societies commencing from August 1 next. The committee propose to call a meeting of the association as soon as possible, when a full report of the proceedings will be presented. Meanwhile it is strongly urged that you will still support the action of the committee by adhering to the resolution of the last meeting of the trade—viz., "not to pay the advance in wages until it has been agreed upon in conference with the committee." The committee are convinced that a settlement satisfactory to the trade generally will be arrived at if the members of the association will loyally adhere to the resolution.—I am, dear sir, yours faithfully.—(Signed) R. S. HENSHAW, Secretary."—It is now reported that upwards of 5,000 carpenters and joiners have resumed work.

LEGAL.

IMPORTANT BUILDING PROSECUTION AT LEEDS:

CASE IN THE DIVISIONAL COURT.

THE case of Cook *v.* Hainsworth came before a Divisional Court of Queen's Bench, consisting of the Lord Chief Justice and Mr. Justice Wills, on Monday and Tuesday last, it being a case stated by the learned Stipendiary Magistrate for the City of Leeds on certain questions of law. The facts were shortly these:—On December 30 last an information was preferred by Hainsworth, the Inspector for New Buildings for Leeds against George Cook (the appellant) under By-law No. 61 of the by-laws with respect to new streets and buildings in Leeds, on the ground that the appellant did, on September 21, 1895, unlawfully erect a house and shops in the Otley-road and Wood-lane, Headingley, without having the plans thereof approved by the Corporation of Leeds, as required by By-law No. 61. It appeared that on June 14, 1895, the appellant gave to the Corporation notice of his intention to erect the premises in question, and deposited plans and sections indicating in detail the situation, character, and size of the buildings which he proposed to construct. On June 24, 1895, the Corporation gave the appellant written notice that the plans were disapproved of by them inasmuch as a back-road, in accordance with Section 57 of the Leeds Improvement Act, 1893, was not provided, and the back of the proposed house and shops would be less than 19 ft. 6 in. from the boundary of the property, contrary to Sub-section 4 of the said section. Notwithstanding the disapproval of the plans by the Corporation, the appellant commenced to erect certain buildings on the site indicated in the plans, and thereupon the Corporation on October 1, 1895, gave the appellant written notice of the alleged offence.

By-law No. 61 provided that any person intending to erect any new building should give to the Corporation twenty-one days' notice in writing of such intention by leaving the same at the office of the surveyor for the time being of the said Corporation, and should with such notice deposit plans and sections showing in detail the situation, character, and size of the proposed new buildings. By-law No. 63 further provided that the Corporation should approve or disapprove of the proposed new buildings within the twenty-one days specified for giving the notice aforesaid. By-law No. 61 also provided as follows: "Any person who shall erect any new building . . ., &c., without giving such notice and delivering such plans and sections as aforesaid or without having the said plans approved of by the Corporation or in any wise contrary to plans and sections which have been approved by the Corporation shall be liable for each offence to the penalty hereinafter prescribed in these by-laws." By-law No. 70 provided that "Every person offending against any of the by-laws shall, except where otherwise expressly provided, be liable for every such offence to a penalty of 5*l.*, and in each case to a continuing offence to a further penalty of 40s. for each day after written notice of the offence from the Corporation."

No evidence was tendered by either party to prove or disprove the allegation that the buildings which were described in the deposited plans did not comply with the requirements of Section 57 of the Leeds Improvement Act, 1893, nor was evidence tendered by either party as to the character of the buildings actually constructed by the appellant.

The appellant contended that By-law No. 61 was unreasonable, because it gave an absolute power of veto to the Corporation whether by-laws were complied with or not, and was *ultra vires*, inasmuch as it was not authorised by any statute. He further contended that Section 158 of the Public Health Act, 1875, limited the power of disapproval to cases where the proposed buildings were not in accordance with the by-laws.

The contention of the respondent was that the by-law was not *ultra vires*, but was expressly authorised by the local Acts in force in Leeds, and that if the appellant had felt aggrieved by the order and determination of the Corporation, he ought to have appealed to the Quarter Sessions under Section 128 of the Leeds Improvement Act, 1866, or to have applied to the High Court for a mandamus to compel the Corporation to pass the plans. The respondent further contended that by erecting new buildings without the approval of the Corporation the appellant had infringed By-law No. 61, and was liable to a penalty under By-law No. 70, and to a daily penalty for a continuing offence in maintaining the buildings after receipt of the notice of October 1, 1895.

The Magistrate convicted the appellant under By-law No. 61, and fined him 3*l.* including costs, but held that there was no continuing offence, and that the respondent was not entitled to claim a daily penalty from the receipt of the notice of October 1, 1895, the remedy (in case it could be established that the buildings contravened the provision of the by-laws of the Local Improvements Acts) being by way of demolition of the buildings under the powers conferred by the Public Health Act, 1875, and the Leeds Improvement Act, 1869.

The question for the opinion of the court was whether the appellant was legally and properly convicted of the offence charged in the information.

Mr. Lawson Walton, Q.C., M.P., and Mr. Bainton appeared as counsel for the appellant; and Mr. Forbes, Q.C., and Sir George Morris for the Corporation of Leeds.

Their Lordships, at the conclusion of the arguments of counsel, held that the decision of the learned Stipendiary Magistrate was right, and dismissed the appeal with costs.

OBSTRUCTION OF ANCIENT LIGHTS IN THE CITY.

IN the Chancery Division on the 15th inst., Mr. Justice North heard the action of Battersea and others *v.* the Commissioners of Sewers of the City of London. The plaintiffs, Lord Battersea and others, are the trustees of the Weavers' Hall in Basinghall-street, E.C., being possessed for a term of years of the hall, and they claimed an injunction restraining the defendants from erecting a building so as to obstruct the ancient lights of the hall.

Mr. Swinfen Eady, Q.C., and Mr. J. G. Wood

CONTRACTS AND PUBLIC APPOINTMENTS.

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
*Timber	Eton Union	.....	May 26
Schools	Bolton-on-Dearne (Yorks) School Board	H. L. Tacon, Archt. 11, Westgate, Rotherham	do.
Kerbs and Flags	Adlington (Lancs) U.D.C.	John Stanton, Council Offices, Chorley	do.
Reconstructing Factory, Leeds	Hepworth & Son, Lim.	W. S. Braithwaite, Archt. 6, South Parade	do.
Sewers, Surrey-road, &c.	Bournemouth T.C.	F. W. Lacey, Boro' Surv.	do.
Sewers, &c.	Bridgend (Glam) U.D.C.	Mr. Williams, Surv. Adare-street	do.
Stoneware, &c. Pipes, Willington	Burton-on-Trent Corp.	J. E. Swindlehurst, Boro' Surv.	do.
*Making-up and Paving Street	Fulham Vestry	C. Botterill, Town Hall, Walham Green	May 27
Road Works, Fenton-street, &c.	Bury (Lancs) Corp.	Boro' Engineer, Bank-street, Bury	do.
Technical School	Bilston (Staffs) U.D.C.	M. Wilson, Archt. Town Hall, Bilston	do.
Forcing House, &c. Upper Park	Eirkenhead Corp.	C. Brownridge, C.E. Town Hall	do.
*Tar Paving	Mile End Old Town Vestry	J. M. Knight, Vestry Hall	do.
Swimming Bath, Marsh-lane, Cyprus-road		J. A. Crowther, C.E. Town Hall	do.
Foundry and Machine Shops	Bootle (Lancs) Corp.	The Secretary, Co.'s Offices, Surrey-street	do.
Villa, Galwally Park, Newtownbreda, Ireland	Glossop Ironworks Co. Lim.	Phillips & Son, Archt. 61, Royal-avenue, Belfast	do.
Houses, Ley, Cushnie, Aberdeen	W. R. McMurray	Jenkins & Marr, Archt. 16, Bridge-street, Aberdeen	do.
Office Houses, Old Deer, Aberdeen	.....	do.	do.
Semi-detached Villa, Almouth, R.S.O.	.....	M. Temple Wilson, Archt. 69, Narrowgate, Alnwick	do.
Engine Chimney, Liversedge, Yorks.	.....	Milnes & France, Archt. Bradford	do.
*Roadmaking and Paving	Willesden D.C.	O. C. Robson, Public Offices, Dyne-road, Kilburn	do.
Electric Light Station	Hammersmith Vestry	H. Mair, Vestry Offices	do.
Drainage of Asylum, Caterham	Metropolitan Asylums Board	Norfolk House, Norfolk-street, Strand, W.C.	May 28
Widening Ellington Bridge, near Morpeth	.....	County Surv. Moot Hall, Newcastle-on-Tyne	do
Road Materials, &c. Hayward's Heath, Sussex	Cuckfield U.D.C.	T. Simmons, Surv. Cuckfield	do.
Residence, Gildersome, Yorks	R. A. Holliday	T. A. Buttery, Archt. Queen-street, Morley	do.
House, The Mount, Mount Pottinger, Belfast	W. Gibson	T. Roe, Archt. 1, Lombard-street, Belfast	do.
House, Caellepa, Bangor, Wales	T. W. MacDermid	Grierson & Bellis, Archt. Bangor	May 29
*Distempering	St. George-in-the-East Guardians	G. A. Wilson, Vestry Hall	do.
Brick Bridges, Burton Agnes, Yorks.	Beverly, &c. Drainage Commissioners	W. Evans, Surv. Beverley	May 30
Four Houses, Neville's Cross, Durham	J. Ainsley	W. Cook, 59, Saddler-st. Durham	do.
Residence, Penllwyn-road, Carmarthen	.....	G. Morgan & Son, Archt. 24, King-street	do.
Four Houses, St. Luke's, Cork	.....	W. H. Hill, jun. Archt. 28, South Mall	do.
*Water Mains, &c.	St. Marylebone Gdns.	A. S. Snell, 22, Southampton-bldgs, Chancery-lane	June 1
*Painting, Colouring, &c.	St. Marylebone Gdns.	Superintendent, Schools, Southall, Middlesex	do.
Street Improvement Works, Sydney-road	Eastbourne T.C.	R. M. Gloyne, C.E. Boro' Surv.	do.
*Sewerage Works	Romford U.D.C.	Brundell, Simmons, & Brundell, 1, Princes-st. Doncaster	do.

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Laying Sanitary Pipes, Westerton	Bishop Auckland R.D.C.	C. Johnston, Surv. 1, Cradock-street	
*Baths, Arcade, Shops, &c.	Southend-on-Sea Corp.	Thompson & Greenhalgh, High-street, Southend	June 1
*Cutting Trenches, Excavations, &c.	Merthyr Tydfil U.D.C.	T. F. Harvey, Merthyr Tydfil	June 2
*Painting, &c.	Whitechapel Union	B. J. Capell, 70, Whitechapel-road, E.	do.
Vestry Room and Altering Chapel, Glyncetriog, Denbighshire	Calvinistic Methodists	R. L. Jones, Archt. Mount-place, Bala	do.
*Reconstruction of Baths and Washhouses	St. Mary (Islington) Vestry	A. H. Giltman, 6, John-st. Bedford-row, W.C.	June 3
Fourteen Houses, East Ardsley, Yorks	Holliday & Sons	T. A. Buttery, Archt. Queen-street, Morley	June 4
Additions, &c. Police Station, Maestag, Wales	Standing Joint Com. (Glam.)	County Surv. Town Hall, Bridgend	June 5
*Granite Channelling and Kerbing	Beckenham U.D.C.	J. A. Angell, Council Offices	do.
*Chimney Shaft	Borough of Croydon	8, Katerine-st. Croydon	June 8
*Lighthouse, Northumberland	Trinity House Corp.	Lights Dept. Trinity House, E.C.	do.
*Sewerage Works	Erith U.D.C.	G. Chatterton, 46, Queen Anne's Gate, S.W.	do.
*Erection of Casual Wards	Sevenoaks Union	T. Potter, 49, London-road Sevenoaks	do.
*Making-up Brook-street	Tottenham U.D.C.	P. E. Murphy, 712, High-road, Tottenham	June 9
*Tar and Asphalte Paving	do.	do.	do,
*Repainting, &c. Chelsea Bridge	LondonCountyCouncil	Engrs. Dept. Spring-gardens, S.W.	do,
*Alterations, St. Anne's Home, Streatham	St. Pancras Vestry	A. A. Millward, Vestry Hall, Pancras-road, N.W.	do.
*Branch Free Library	St. John's (Hampstead) Vestry		June 11
*Alterations, &c. Borough Market	Borough Market Trustees	The Surveyor, Vestry Hall	do.
Hospital, &c. Hertford	Joint Hospital Board	Widnell & Trollope, 13, Parliament-street, S.W	do.
Sewerage Works	Cheltenham Corp.	W. L. Grant, Archt. Sittingbourne	June 12
*Sewage Works	Worcester City Council	Boro' Surv. Municipal Offices	do.
*Painting, &c.	War Department (R.E.	City Engineer	June 22
*Painting	do.	R. E Office, Newcastle-on-Tyne	June 30
Residence, Belper	.....	Head Quarters Offices, South Aldershot	No date
Building, Meanwood-road, Leeds	.....	M. Hunter, Archt. Belper	do.
Four Houses, Ilkeston, Derby	.....	W. Smith, 90, Albion-street Leeds	do.
*Nurses' House and Ophthalmic Wards	Sheffield General Infirmary	C. N. Holloway, Archt. Angel-row, Nottingham	do.
		J. D. Webster, 19, St. James'-street, Sheffield	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in
*Junior Assistant	Birkenhead Corp.	80*l.* rising to 100*l.* per annum	June 1
*Sanitary Inspector	Hammersmith Vestry	110*l.* rising to 150*l.* per annum	do.
*Sanitary Inspector	St. Mary Newington Vestry	110*l.* rising to 150*l.* per annum	do.
*Clerk of Works	St. Mary Newington Vestry	3*l.* 3*s.* per week	June 2
*Clerk of Works, Kensal Town Baths	Chelsea Baths, &c. Commissioners		June 3

Those marked with an asterisk (*) are advertised in this Number. Contracts, pp. iv., vi., viii., & ix. Public Appointments, pp. xvi., & xviii.

appeared for the plaintiffs; and Mr. Vernon Smith, Q.C., and Mr. Henderson for the defendants.

Mr. Eady said the ancient lights were admitted, and the question that arose was as to the date at which a certain building was pulled down. The defendant's buildings were 72, 73, 74, and 75, Basinghall-street.

After some discussion the case was settled, the defendants consenting to an injunction against them restraining them from erecting any building so as to darken the plaintiffs' ancient lights, as enjoyed by them before the pulling down of a building 14 ft. high.

Mr. Smith, however, asked for a reduction in the costs against them, owing to the plaintiffs' writ having originally been wrongly drawn up, and his Lordship gave the plaintiffs their costs, less 10*l.*

MEETINGS.

TUESDAY, MAY 26.

Royal Institution.—Professor T. G. Bonney, F.R.S., on "The Building and Sculpture of Western Europe." I.

THURSDAY, MAY 28.

Institution of Electrical Engineers.—Mr. A. Steiger on "The Utilisation of Water Power, especially with a small fall, with some examples of plants for the generation of Electrical Energy." 8 p.m.

Royal Institution.—Mr. R. Munro on "Lake Dwellings." I.

FRIDAY MAY 29.

Architectural Association.—Annual Dinner, Holborn Restaurant. 7 p.m.

SATURDAY, MAY 30.

Institution of Junior Engineers.—Visit to the Fowler-Waring Cable Works, North Woolwich. 10.30 a.m.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

May 1.—By A. DOWELL (at Edinburgh).

Leuchars, Fifeshire.—The Lands of Edenbank and Arnots Dron, 172 a. £8,500

May 5.—By HUBERT WATKINS (at Clun).

Clunbury, Salop.—Llanbrook, and enclosures, 12 a. 2 r. 0 p., f. 425

By PALMER & STILING (at Highbridge).

Burnham, Somerset.—Southwick, &c., enclosures of land, 69 a. 0 r. 34 p., f. 4,433

May 6.—By A. E. ARMSTRONG (on the premises).

Newbury, Berks.—Wash Common, 2 enclosures, 7 a. 2 r. 30 p., f. 350

By THOMPSON, RIPPON, & Co. (at Okehampton.)

Okehampton, Devon.—"Fatherford Farm," 30 a., f. 1,370

By Messrs. HOWLETT (at Gt. Yarmouth).

Ludham, Norfolk.—"The Grange Farm," 89 a. 3 r. 29 p., f. and c. £2,500

Four enclosures, 17 a. 3 r. 26 p., f. and c. 555

By W. WIGGINS (at Kilsby).

Kilsby, Northants.—Three freehold cottages 110

By LEES & BURCHELL (at Redhill).

Charlwood, Surrey.—1 and 2, Cyril Cottages, f., r. 23*l.* 8*s.* 420

1 to 4, Providence cottages, f., r. 31*l.* 4*s.* 440

By W. WILSON & SON (at Manchester).

Moston, Lancashire.—St. Mary's-rd., a plot of land, area 3,800 yds., f. 320

May 7.—By FULLER, MOON, & FULLER (at Croydon).

Croydon.—15, Church-st., f., r. 35*l.* 850

17 and 18, Tamworth-rd., f., r. 58*l.* 800

Cherry Orchard-rd., profit rental of 8*l.* 10*s.* for 44½ yrs 150

Cherry Orchard-rd., f.g.r. 14*l.*, reversion in 43 yrs. 440

Cherry Orchard-rd., "The Leslie Arms" hotel and ½ of an acre, f., r. 70*l.* 5,535

Whitehorse-rd., "The Gloucester Tavern" public-house and ½ of an acre, f., r. 55*l.* 6,630

Mitcham-rd., "The Sawyer's Arms" public-house, f., r. 30*l.* 910

By S. C. MILLER & ABBOTTS (at Banbury).

Little Bourton, Oxon.—A freehold farm, comprising 39 a. 1 r. 13 p. 1,520

Grimsbury, Oxon.—Freehold brickyard, grist mill, and 6 a. 1 r. 37 p. 650

By RENTON & RENTON (at Bradford).

Burley-in-Wharfedale, &c., Yorks.—"The Grange" and 127 a. 0 r. 6 p., f. 6,125

Four enclosures of land, 5 a. 1 a. 6 p., f. 770

By S. & J. TOOTELL & SONS (at Maidstone).

Boughton-Monchelsea, Kent.—"The Boughton Mount Estate," comprising 432 a. 1 r. 39 p., f. 35,000

By HEPPER & SONS (at Bramley).

Bramley, Yorks.—368, Town-st., and 1, Hanover-st., f., r. 24*l.* 4*s.* 640

270, 272, and 274, Broad-lane, f., r. 36*l.* 885

Rodley, Yorks.—"Coal Hill Farm," 24 a. 2 r. 16 p., f., and long leasehold, r. 54*l.* 2,900

By D. WATNEY & SONS.

Croydon.—Mansfield-rd., six plots of building land, f. 2,300

Crunden-rd., &c.—Six plots of building land, f. 1,615

By STIMSON & SONS.

Fulham.—43, Filmer-rd., f., r. 36*l.* 475

Peckham.—243, Queen's-rd., u.t. 69 yrs., g.r. 5*l.*, e.r. 40*l.* 375

Walworth.—70, Villa-st., u.t. 55 yrs., g.r. 11*l.* 15*s.*, e.r. 60*l.* 365

Woolwich.—12 and 16, Thomas-st., u.t. 17 yrs., g.r. 20*l.*, r. 85*l.* 400

Forest Hill.—33 and 35, Kemble-rd., u.t. 80½ yrs., g.r. 2*l.*, r. 58*l.* 670

Sydenham.—8, 9, and 10, Florence-villas, u.t. 70 yrs., g.r. 6*l.* 13*s.* 375

12, 13, and 15, Kinver-rd., u.t. 87 yrs., g.r. 13*l.* 10*s.*, r. 100*l.* 820

Bayswater.—63, Richmond-rd., u.t. 60 yrs., g.r. 10*l.*, r. 70*l.* 600

2, Shrewsbury-rd., u.t. 60 yrs., g.r. 10*l.*, r. 65*l.* ... £630

By NEWBON & Co.

Holloway.—45 and 47, Marlborough-rd., u.t. 69½ yrs., g.r. 14*l.* 14*s.*, r. 74*l.* 600

Finsbury-pk.—26 to 36 (even), Charteris-rd., u.t. 68½ yrs., 30*l.*, r. 180*l.* 1,485

Holloway.—8 and 10, Middlesex-st., u.t. 64 yrs., g.r. 7*l.* 330

[*Contractions used in these Lists.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent, r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.

PRICES CURRENT OF MATERIALS.

TIMBER.

Greenheart, B.G. ton	8/0/0	0/0/0
Teak, E.I. load	11/0/0	16/0/0
Sequoia, U.S.ft.cu	2/0	2/1
Ash, Canada load	3/5/0	4/10/0
Birch, do.	3/10/0	5/5/0
Elm, do.	4/0/0	5/5/0
Fir, Dantsic, &c..	1/10/0	3/0/0
Oak, do.	2/5/0	3/15/0
Canada	6/0/0	7/10/0
Pine, Canada red	0/0/0	0/0/0
Do. Yellow	2/15/0	5/0/0
Lath, Dantsic, fath	4/0/0	5/10/0
St. Petersburg	5/0/0	6/10/0
Wainscot, Riga &c., log	2/5/0	4/10/0
Odessa, crown	2/5/0	4/10/0
Deals, Finland 2nd & 1st std 100	7/10/0	9/0/0
Do. 4th & 3rd	7/10/0	8/10/0
Do. Riga	7/10/0	8/10/0
St. Petersburg, 1st yellow	10/10/0	13/0/0
Do. 2nd yellow	8/10/0	10/10/0
Do. white	8/10/0	11/0/0
Swedish	7/10/0	16/0/0
White Sea	8/10/0	15/10/0
Canada, Pine 1st	23/5/0	23/10/0
Do. do. 2nd	16/0/0	17/0/0
Do. do. 3rd, &c.	8/0/0	10/15/0
Do. Spruce, 1st	9/0/0	10/10/0
Do. do. 3rd and 2nd	7/10/0	8/10/0
New Brunswick	7/0/0	8/0/0
Battens, all kinds	5/0/0	20/0/0
Flooring boards, sq., 1 in. prep. 1st	0/10/0	0/15/0
Do. 2nd	0/6/6	0/12/0
Other qualities	0/5/6	0/7/0
Cedar, Cuba, ft.	1/4	/5
Honduras, &c.	1/4	/5
Mahogany, Cuba	1/4½	/6
St. Domingo cargo av.	1/4½	1/3
Mexican, do. do.	1/4	/5
Tobasco, do. do.	/5	/7
Honduras, do.	/5	/6½
Box, Turkey ton	4/0/0	15/0/0
Rose, Rio	7/0/0	16/0/0
Bahia	6/0/0	15/0/0
Satin, St. Doming	0/0/7	0/1/0

TIMBER (*continued*).

Satin, Porto Rico	0/0/7	0/1/6
Walnut, Italian	0/0/3	0/1/7

METALS.

Iron—Pig, in Scotland ton	2/6/0	0/0/0
Bar, Welsh, in London	5/12/6	5/15/0
Do. do. at works in Wales	5/2/6	5/5/0
Do. Staffordshire, in London	6/0/0	6/10/0
COPPER—British cake and ingot	57/0/0	57/5/0
Best selected	50/10/0	50/15/0
Sheets, strong	57/0/0	0/0/0
Chili bars	46/8/9	46/15/9
YELLOWM'TALib	0/0/4½	0/0/5½
LEAD—Pig, Spanish ton	11/5/0	11/7/3
English com. brands	11/2/6	11/5/0
Sheet, English 6 lbs. per sq. ft. and upwards	12/0/0	0/0/0
Pipe	12/10/0	0/0/0
ZINC—English sheet ton	20/0/0	0/0/0
Vieille Montagne	20/10/0	0/0/0
TIN—Straits	60/5/0	60/12/6
Australian	61/5/0	62/2/6
English Ingots	66/0/0	0/0/0

OILS.

Linseed ton	18/5/0	18/15/0
Cocoanut, Cochin	26/15/0	0/0/0
Do. Ceylon	22/10/0	22/15/0
Palm, Lagos	20/10/0	0/0/0
Rapeseed, English pale	23/0/0	23/10/0
Do. brown	21/10/0	22/0/0
Cottonseed ref.	16/0/0	16/10/0
Oleine	18/0/0	18/10/0
Lubricating U.S.	0/0/0	0/0/0
Do. black	0/0/0	0/0/0
TAR—Stockholm barrel	1/9/6	1/0/0
Archangel	0/14/6	0/15/0

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 10 a.m. on Thursdays.* N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender: and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

ALDEBURGH (Suffolk).—For the erection of the "Golf Links" Hotel for a Syndicate. Mr. Walter Graves, architect, Winchester House, E.C.:—

G. O. Knowles	£12,649	J. Youngs & Son	£11,040
J. Downing & Son	11,300		

AMERSHAM. — For laying pipes, &c., for the Amersham, Beaconsfield and District Waterworks. Mr. E. A. Sandford Fawcett, engineer, 1, Victoria-street, Westminster:—

Free & Sons	£1,900	Ward & Cannon	£1,643
Williams Bros.	1,800	Lee & Sons	1,600
Baldwin & Son	1,708	G. Darlington (accepted)	1,595

BOVEY TRACEY (Devon).—For the erection of two houses. Mr. Samuel Segar, architect, Union-street, Newton Abbot:—

John Winsor	£740	James Turner*	£683 16
Silas H. Davie	716 0	* Accepted.	

[All of Bovey Tracey.]

BRADFORD. — For the extension of Parsonage-road near Laisterdyke, Bradford, for Mr. William Terry and others. Mr. B. Walker, engineer, Exchange, Bradford:—

Walter Barrand, Bradford	£430.

BRISTOL.—For the erection of cookery and other building works, Barton Hill, for the School Board. Mr. W. L. Bernard, architect:—

E. Walters	£520	G. Humphries	£468
J. Bastow	520	Hatherley & Carr	467
Enos Gay	519	R. Wilkins & Sons	450
Eastabrook & Sons	484	J. Perrott	443
G. Downs	480	E. F. Woodward, Southwell-street*	427
W. Church	472	* Accepted.	
C. Love	469		

BUXTON.—For the erection of seven cottages, Mycock's Croft, Fairfield, for Messrs. Critchlow & Keeling. Messrs. Garlick & Flint, architects, Terrace-road, Buxton.

Anthony Wall, Fairfield, Buxton	£1,115

CARDIFF.—For the erection of gardener's cottage, &c., Glan Ely, near St. Fagan's, for Mr. F. Matthews. Mr. G. E. Halliday, architect, 14, High-street, Cardiff. Quantities by Mr. John W. Rodger, 14, High-street, Cardiff:—

C. C. Dunn, Cardiff*	£402 6 10	W. Cox	£388 18 7
W. Thomas & Co.	400 0 0	T. H. Short	370 7 0
	* Accepted.		

CHELMSFORD. — For the erection of two pairs cottage villa-residences, Vineyards Building Estate. Mr. F. Whitmore, architect, 17, Duke-street, Chelmsford:—

W. Fincham	£1,180	E. West	£1,100
Hy. Kennell	1,178	H. Potter	1,055
Jno. Rayner	1,140	J. L. Near, Colchester*	940
	* Accepted.		

CHESHAM.—For alterations and additions to the "Unicorn" publichouse, for the Chesham Brewery Company, Limited. Mr. G. N. Green, architect, Chesham and Willesden Green, N.W. Quantities by Mr. G. W. Elwell, 13, Bedford-row, W.C.:—

Parker	£1,598 0	A. E. Wilson	£1,177 14
A. W. Nash	1,359 10	J. Potter	1,147 10
G. Darlington	1,350 0	T. Wilson	1,140 10
Honour & Son	1,270 0	E. Quick	1,090 0
Abbott & Son	1,220 0	A. Mead, Chesham*	1,050 0
H. Fincher	1,200 0	* Accepted.	

CUDDINGTON (Surrey).—For the erection of isolation hospital. Mr. H. D. Searles Wood, architect, 157, Wool Exchange, E.C.:—

Wells	£11,223 0	R. J. Humphries	£10 295 0
E. J. Burnand	10,800 0	Peters & Son	10,200 0
J. B. Potter	10 695 0	Balchin & Shopland, Sutton*	9,870 0
S. Hards	10,584 7	* Accepted.	
Grist & Co., Ltd.	10,478 0		

DARWEN (Lancs.).—Accepted for the erection of new offices for the *Darwen News*, and shop, Duckworth-street, for Mr. J. J. Riley, J.P., C.C. Mr. J. B. Thornley, architect, Darwen. Quantities by the architect:—

Masonry, Joinery, Slating, and Plumbing.—John Knowles £1,520

Plastering and Painting.—R. Jackson 146

[Both of Darwen.]

[Architect's estimate, £1,650.]

DEVONPORT. — For alteration to and decoration of bar of "Marlborough Hotel," for Mr. W. H. Quantick. Mr. H. G. Luff, architect, 64, Chapel-street:—

T. Jenkin & Son	£467 10	W. J. Oliver, 1, Acre-place, Devonport*	£353 5
J. Healy & Son	456 18	* Accepted.	
G. H. Smith & Son	409 15		

DOVER.—For the erection of three shops, with dwellings over, in Priory-place for Mr. H. W. Thorpe. Messrs. Worsfold & Hayward, architects, Dover, and 80, Cannon-street, E.C. Quantities by Messrs. Dunk & Bousfield, Billiter-square-buildings, E.C.:—

W. J. Adcock	£1,635*	W. Bromley	£1,559 0
H. Stiff	1,595 0	Hayward & Paramor	1,490 0
Austen & Lewis	1,580 7	W. & T. Denne	1,480 0
G. Lewis & Sons	1,580 0	Walmer*	1,450 0
	*Accepted.		

FELIXSTOWE (Suffolk).—For the erection of a police station for the East Suffolk County Council. Mr. H. Miller, C.E., County Surveyor, 16, Museum-street, Ipswich. Quantities by the architect:—

E. West	£1,687 0 0	W. Durrant	£998 10 0
T. Ward	1,669 0 0	W. Grayston	996 10 0
S. A. Kenny	1,648 0 0	T. Parkington & Son, Ipswich*	975 0 0
T. Wawman	1,030 0 0	F. Cooper	965 14 6
D. Thurman	999 0 0	* Accepted.	

HANLEY.—For the erection of two houses for Mrs. E. Boulton. Mr. W. A. Baynes, architect, Birches-road, Hanley:—

E. Roberts (lowest of four)	£415

HANLEY.—For the erection of two houses in Turner-street, for Mr. W. Asplin. Mr. W. A. Baynes, architect, Birches-road, Hanley:—

T. Hobbs (lowest of four)	£323

HINDLEY (Lancs.).—Accepted for the erection of club premises, Market-street, for the Conservative Buildings Club Co., Limited. Mr. Thos. A. Buttery, architect, Queen-street, Morley:—

H. & F. Lomax, Platt Bridge	£2,598

HORSHAM (Sussex).—For the erection of a private residence at Clarence-road, Horsham, for Mr. A. G. Wheeler. Mr. C. H. Burstow, architect, 40, North-street, Horsham.

Potter Bros.	£750	Rowland Bros.	£689
R. Cook & Sons	725	G. Sharp	510
Pannett Bros.	699	Hillman & Murrell, Horsham*	448
	* Accepted		

LONDON.—For the erection of a public library, Hoxton.

J. Godfrey & Son	£11,365	J. Parnell & Son	£10,724
T. H. Kingerlee	11,306	Atherton & Dolman	10,692
H. Lovatt	10,982	G. E. Todd	10,594
Thompson & Beveridge	10,925	B. E. Nightingale	10,445
H. L. Holloway	10,862	Chas. Dearing & Son. Halliford-st., Islington*	10,250
J. Chessum & Sons	10,779		
	* Accepted.		

LONDON. — For alterations and additions to the "Prince Consort," New Kent-road, S.E., for Mr. W. J. Huxley. Messrs. Lawson Bros., surveyors, Great Dover-street:—

Bawney	£1,958	Eames*	£1,275
Redhouse	1,730	* Accepted.	

LONDON.—For alterations and repairs at the "Dun Cow" public-house, No. 458, Wandsworth Road, S.W., for Messrs. Chandler & Co. Mr. E. J. Strevens, architect, 246, Camberwell-road, S.E. Quantities supplied:—

B. E. Nightingale	£717	F. Eames	£580
Wm. Downs	699	Turtle & Appleton	580
J. H. Pugh	695	King & Son	570
J. Tyerman	660		

LONDON.—For alterations and additions to "The Franchise" public-house, Andover-road, Hornsey, N., for Mr. W. W. Smith. Mr. E. J. Strevens, architect, 246, Camberwell-road, S.E. Quantities supplied:—

Rowe & Sons	£1,425	Sheffield Bros.	£1,077
Whitehead & Co.	1,155	J. H. Pugh*	1,059
King & Son	1,100	J. Tyerman	1,056
Wm. Downs	1,097	* Accepted.	

LONDON. — For alterations and new shop-fittings, Lamb Restaurant, Long-lane, E.C., for Mr. Joseph Young. Mr. J. McMullen Brooks, architect, 4, Queen Victoria-street, E.C.:—

J. H. Johnson	£447
J. Lidstone & Son, West Smithfield (accepted)	360
[Architect's estimate, £314.]	

LONDON.—For decorating, new seating, &c., at Christ Church, Newgate-street. Mr. R. Philip Day, architect:—

Shaw	£974	Pitman & Son	£859
Jarvis & Son	890	Dove Bros. (accepted)	755

LONDON.—Accepted for additional story, repairs, and decorations to No. 6, Devonshire-place, W., and for works to stables in rear, for Major J. Roper Parkington, J.P. Mr. Lewis H. Isaacs, architect, 3, Verulam-buildings, Gray's Inn. Quantities by Mr. J. F. Bull, 30, Bedford-row, W.C.:—

R. E. Worsley & Co., Gray's Inn-road	£1,450

LONDON.—For decorative works at the "Load of Hay," Praed-street, for Messrs. Baker Bros. Messrs. Saville & Martin, surveyors:—

Hendry	£230 0	Diamond & Porter*	£137 10
Bywaters	222 0	* Accepted.	

LONDON.—Accepted for building additions to 12, Palace Gardens-terrace, for the Trustees of the late Mr. W. L. Edwards. Mr. G. Sexton, architect and surveyor:—

Diamond & Porter	£240

LONDON.—Accepted for the erection of four houses in Philip-lane, Tottenham, for Mr. H. Moore, 59, Bishopsgate Within. Mr. E. Howard, architect, Tottenham:—

W. Hawley, Tottenham	£996

LONDON.—For the erection of free library, Pitfield-street, Shoreditch, for the Commissioners. Mr. Henry T. Hare, architect. Quantities by Mr. G. Fleetwood:—

Godfrey & Son	£11,365	Parnell & Sons	£10,724
T. H. Kingerlee	11,306	Atherton & Dolman	10 692
H. Lovatt	10,982	G. E. Todd	10,594
Thompson & Beveridge	10 926	B. E. Nightingale	10,455
H. L. Holloway	10,862	Dearing & Son	10,250
Chessum & Sons	10,779		

LLANDILO (Wales).—For the erection of school and residence, Capel Isaac, for the Llandilo Fawr U.D. School Board. Mr. Hy. Herbert, architect, Brynmarlais, Ammanford, R.S.O. Quantities by the architect:—

D. Evans	£2,178	Thomas & Stephens, Llandilo*	£1,500
Thomas & Evans	1,685	D. J. Pugh	1,400
G. Mercer	1,566	* Accepted.	

MARGATE.—Accepted for the erection of three shops for Mr. John Abrahams. Mr. Walter Graves, architect, Winchester House, Old Broad-street:—

Denne & Sons, Walmer	£1,992

MARGATE.—Accepted for the rebuilding of No. 3, Duke-street, for Mr. Edward Burch. Mr. Walter Graves, architect, Winchester House, E.C.:—

Paramor & Son, Margate.	(Schedule of prices.)

NORTON FITZWARREN (Somerset).—For the erection of village club for Mr. W. Marshall. Mr. J. H. Spencer, architect, 8, Hammet-street, Taunton. Quantities by Mr. E. W. Fricker, 19, St. Stephen's Mansions, S.W.:—

H. W. Pollard, Bridgwater	£1,564	Vickery & Poole, Stable-grove (accepted)	£1,339

TAUNTON.—Accepted for additions to Gloucester-street Mission Hall (a galvanised iron structure). Mr. J. H. Spencer, architect, 8, Hammet-street, Taunton:—

J. Mountstephens, Taunton	£179 17

TON-Y-PANDY (Glam.).—Accepted for rebuilding Co-operative Stores, Pandy-square, for the Ton-y-pandy Co-operative Society, Limited. Messrs. Griffiths & Jones, architects Pontypridd and Ton-y-pandy:—

D. Evans & Sons, Penygraig, near Pontypridd	£1,623

WALTHAM ABBEY.—For erection of four houses for Mr. R. B. Colvin. Mr. F. W. Adams, architect, 18, Eldon-street, E.C. Quantities supplied:—

Horlock	£1,139	W. Gardener	£941
Balaam	1,080	T. Pollit	908
Fairhead & Son	1,035	W. Lawrence, Waltham Abbey (accepted)	871
J. Bentley	997		

WOKING.—For alterations to "Breydon," Horsell, for Mr J. Leslie Sweet. Messrs. Pooley & Foliett, architects, John St. Adelphi, W.C.:—

Harris & Son, Woking	£921	S. Chafen, Deptford	£915

LONDON SCHOOL BOARD TENDERS.

THE following lists of tenders have just been submitted to the London School Board by the Works Committee of that body:—

CHELSEA (St. Clement's-road, Old School).—Rebuilding the girls' and infants' offices, also providing additional offices for boys, and part new drainage scheme:—

McCormick & Sons	£1,567	Vernall, Danes, & Co.	£1,380
H. Mallett	1,539	Holliday & Greenwood	1,366
T. Cruwys	1,505	E. Triggs	1,344
W. Downs	1,420	R. A. Yerbury & Sons	1,263
Lathey Bros.	1,387	R. P. Beattie*	1,232

EAST LAMBETH (Arthur-street).—Exterior painting:—

H. Mallett	£151 15	J. Garrett & Son	£111 0
J. F. Ford	147 0	G. Kemp	90 0
Holliday & Greenwood	145 0	H. Line†	78 0
W. V. Goad	140 0		

EAST LAMBETH (Bellenden-road).—Repairing and pointing brickwork, &c.:—

J. F. Ford	£220	J. Garrett & Son	£183
D. Charteris	192	Holliday & Greenwood	157
G. Kemp	190	H. Line	149
J. Smith & Sons	190	Lilly & Lilly, Ltd.†	139
H. Leney	187		

EAST LAMBETH (Dulwich Hamlet). — Enlargement by 360 places The plans include the following works: — Additional water-closets and boys' new urinal, hall for girls' department, and removing existing temporary corridor. (Second competition):—

Lathey Bros.	£5,642	J. Longley & Co.	£5,295
J. Smith & Sons	5,634	J. & M. Partrick	5,292
W. King & Son	5,600	J. & C. Bowyer	5,280
G. E. Wallis & Sons	5,596	J. Shillitoe & Son	5,288
Atherton & Dolman	5,496	Peacock Bros.	5,254
W. Pattinson & Sons	5,434	W. Downs	5,237
J. Marsland	5,400	Holliday & Greenwood	5,124
B. E. Nightingale	5,393	C. Cox*	4,944
E. Lawrance & Sons	5,331		

FINSBURY (Tower-street).—Exterior painting:—

G. Chase	£184 0	C. H. Rowe	£119 0
G. Kirby	163 0	W. Hornett	100 0
Johnson & Co.	133 0	W. Chappell	82 15
J. Grover & Son	131 10	T. Nicholson†	76 0
Davis Bros.	122 0		

FINSBURY (New Stores on the Bowling Green-lane Site).—Providing and fixing three lifts:—

A. Smith & Stevens	£671 2	J. Stannah*	£525 0
Easton, Anderson, & Goolden	645 0	Clark, Bunnett, & Co., Lim.	390 0
R. Waygood & Co., Lim.	599 0	Lift & Hoist Co.	280 0
Hydraulic Engineering Company, Lim.	567 5		

FINSBURY (Caledonian-road).—Fitting-up cloak cupboards in boys' and girls' covered playgrounds:—

E. Lawrance & Sons	£495 0	J. Grover & Son	£343 0
G. Chase	459 0	T. Cruwys	340 0
Dove Bros.	375 0	McCormick & Sons	327 0
C. Dearing & Son	356 0	J. Riley	310 0
Stevens Bros.	349 10	G. S. S. Williams & Son*	295 0

FINSBURY (Moreland-street).—Providing Tobin air shafts and ventilating sashes, and making several of the existing fixed sashes to open:—

Johnson & Co.	£315	Staines & Son	£285
C. Dearing & Son	312	E. Lawrance & Sons	280
Dove Bros.	307	W. Hornett*	278
J. Grover & Son	298		

FINSBURY (New Stores, Bowling Green-lane, Clerkenwell).—Providing and fixing two steam boilers with mounts complete, low-pressure steam heating apparatus and hot-water supply to lavatories, sinks, &c.:—

J. Wontner-Smith, Gray & Co.	£1,838	C. P. Kinnell & Co.	£1,475
W. G. Cannon & Sons	1,590	J. C. & J. S. Ellis, Limited	1,365
J. & F. May	1,510	J. Grundy	1 327
Wenham & Waters, Ltd.	1,479	J. Fraser & Son	1,269
		Benham & Sons, Limited*	1,169

FINSBURY (Vittoria-place).—Overhauling existing apparatus, providing and fixing independent boiler and additional coils in class-rooms:—

J. Gray	£236 0	J. C. & J. S. Ellis, Ltd.	£202 10
Maguire & Son	232 0	W. G. Cannon & Sons*	195 0

GREENWICH (Calvert-road).—Exterior painting:—

J. Otway	£290 0 0	W. Banks	£198 17 6
E. Proctor	265 0 0	Johnson & Co.†	195 0 0
Jones & Groves	232 3 0		

GREENWICH (Pope-street site).—Removing an iron building from Fossdene-road, re-erecting it on this site, and fitting it up as a cookery and laundry centre:—

T. Cruwys	£357 0	Humphreys, Limited	£234 0
Croggon & Co., Ltd.	277 10	W. Harbrow*	215 0
D. Charteris	240 0		

HACKNEY (Hamond-square).—Rebuilding boys' and infants' offices, refitting girls' offices on roof playground. Enlarging the schoolkeepers' washhouse, and providing part new drainage scheme:—

W. Shurmur	£2,288	McCormick & Sons	£1,986
F. G. Minter	2,140	Lathey Bros.	1,931
W. Gregar & Son	2,084	J. Garrett & Son	1,841
H. Knight & Son	2,070	E. Triggs*	1,840

HACKNEY (Globe-terrace).—Exterior painting:—

W. Lawrence	£257	C. Willmott	£178
C. Dearing & Son	199	G. Barker	140
E. G. Browning & Co.	195	T. Nicholson†	116

HACKNEY (Orchard-street).—Exterior painting:—

C. Dearing & Son	£177	J. Kiddle & Son	£79
J. Grover & Son	165	Stevens Bros.	76
W. Shurmur	153	W. Silk & Son†	75
G. Wales	90		

MARYLEBONE ("Brecknock").—Exterior painting:—

McCormick & Sons	£271 0	T. Cruwys	£196 0
G. S. S. Williams & Son	259 0	Stevens Bros.	180 0
J. Riley	218 19	Vernall, Danes, & Co.	160 0
G. Foxley	200 0	F. T. Chinchen†	143 0

MARYLEBONE (Capland-street "Junior").—Exterior painting:—

G. H. Sealy	£298 14 6	T. Cruwys	£140 0 0
W. King & Son	228 0 0	G. Foxley	140 0 0
G. Neal	180 0 0	W. Chappell	120 0 0
J. Willmott & Sons	176 0 0	W. Browa	93 10 0
E. T. Folley	147 0 0	F. T. Chinchen†	89 10 0
Marchant & Hirst	147 0 0		

MARYLEBONE (Haverstock Hill).—For providing additional lighting to south class-rooms of Junior Mixed School; additional cloak-room accommodation for boys and girls; removing covered way and water-closets; providing new water-closets for boys' and girls' departments; providing new covered playground for girls and infants, and manual training centre on arches; enclosing, draining, and tar-paving the additional land and providing drainage:—

Dove Bros.	£4,583	G. S. S. Williams & Son	£4,240
T. Boyce	4,511	Staines & Son	4,262
Johnson & Co.	4,490	Treasure & Son	4,161
D. Charteris	4 398	C. Cox	4,090
E. Lawrance & Sons	4,375	R. A. Yerbury & Sons	4,049
W. Shurmur	4,347	Lathey Bros.*	3,942
W. King & Son	4,345		

MARYLEBONE (Fleet-road).—Removing brick wall, and providing and fixing two glazed partitions:—

G. Lyford	£265 0	R. A. Yerbury & Sons	£146 0
Cowley & Drake	189 10	Stevens Bros.	137 18
W. Chappell	185 0	J. Grover & Son*	99 0
Marchant & Hirst	164 0		

SOUTHWARK ("Alma," P. T. Centre).—Altering two fume closets in chemical laboratory:—

W. Downs	£85 0	Johnson & Co.*	£
T. Cruwys	30 0		

SOUTHWARK (Belvedere-place).—Exterior painting :—

W. & H. Castle	£357 14	D. Charteris	£285
H. Leney	353 0	B. E. Nightingale†	257
G. Brittain	309 10		

SOUTHWARK (Kipling-street, late Nelson-street).—Building offices for boys and girls, and providing coal-house, and drainage :..

W. Hornett	£698	W. & H. Castle	£490
Lilly & Lilly, Limited	677	Johnson & Co.*	459

SOUTHWARK (Riley-street).—Girls' Department.—Converting two class-rooms into three by altering one existing partition, and providing a new partition. Providing warming and stepping in centre-room, and all necessary ventilation.—Boys' Department.—Dividing large class-room by new partition, and providing stepping, warming, and ventilation.

G. Newton	£280 0	D. Charteris	£220 0
W. Downs	259 10	B. E. Nightingale	218 0
W. Hammond	247 0	H. Line*	189 0
W. & H. Castle	235 0		

TOWER HAMLETS (Buck's-row).—Rebuilding boys' offices, refitting infants' offices, and new drainage scheme :—

W. Gregar & Son	£889	E. Triggs	£720 0
W. & H. Castle	777	J. Kiddle & Sons	677 0
Stevens Bros.	772	J. T. Robey*	653 10
H. Knight & Son	735		

TOWER HAMLETS (Dempsey-street).—Exterior painting :—

A. E. Symes	£224 0	J. F. Holliday	£166 5
Atherton & Dolman	203 0	G. Barker	158 0
J. T. Robey	175 0	S. H. Cornfield	155 0
G. Wales	172 15	J. Kiddle & Son†	151 0

TOWER HAMLETS (Farrance-street).—Exterior painting :—

D. Gibb & Co.	£213 0	J. T. Robey	£140 0
J. Kybett	188 0	A. W. Derby†	137 0
J. F. Holliday	162 10	C. L. Cole	125 0
S. H. Cornfield	144 0		

TOWER HAMLETS (Glengall-road).—Exterior painting :—

A. W. Derby	£372 10	J. T. Robey	£225 0 0
Atherton & Dolman	289 0	W. Banks	193 15 6
J. Kybett	254 0	Johnson & Co.†	153 0 0
D. Gibb & Co.	240 0		

TOWER HAMLETS (Upper North-street).—Exterior painting :—

A. E. Symes	£146	D. Gibb & Co.	£126
T. H. Jackson	127	J. Kybett†;	112

WEST LAMBETH (Belleville-road).—Providing independent boiler and hot-water coils to corridors and cloak-rooms, and also to three class-rooms in boys' and girls' departments respectively, and two class-rooms in infants' department :—

J. Gray	£314 0	J. Defries & Sons, Ltd.	£270 0
W. G. Cannon & Sons	310 0	Matthews & Yates, Ltd.	256 0
Hendry & Pattisson	285 0	J. C. & J. S. Ellis, Ltd.*	237 10

WEST LAMBETH (Plough-road).—Providing and fixing low-pressure hot water apparatus for new enlargement and additional heating surface to existing apparatus :—

G. Davis	£198 0	Wenham & Waters, Ltd.	£170 0
J. & F. May	184 0	J. C. & J. S. Ellis, Ltd...	154 10
J. Wontner-Smith, Gray & Co.	173 0	Duffield & Co.*	132 0

WEST LAMBETH (Winstanley-road).—Constructing chimneys and fireplaces :—

J. Garrett & Son	£275	W. Hammond	£235
Holliday & Greenwood	270	R. E. Williams & Sons	205
Holloway Bros.	256	J. F. Ford	193
Lathey Bros.	249	E. Triggs*	189

WEST LAMBETH (Raywood-street).—Exterior painting :—

C. Gurling	£174 5 0	G. Wood & Co.	£99 0 0
Holloway Bros.	145 0 0	Heinemann & Brown	80 2 9
Star & Son	133 17 6	Rice & Son	88 0 0
Maxwell Bros., Limited	132 0 0	E. Triggs	74 0 0
Holmes & Clark	115 0 0	E. B. Tucker†	69 9 0

WEST LAMBETH (Surrey-lane).—Exterior painting :—

C. Gurling	£102 0	Heinemann & Brown	£118 15
G. Wood & Co.	178 10	E. P. Bulled & Co.	113 0
W. Hammond	156 15	E. B. Tucker	110 9
R. E. Williams & Sons	129 0	E. Triggs†	102 0

WEST LAMBETH (Rosendale-road site).—Removing building and water-closets from the Rollins-street site and re-erecting them on this site, including foundations and drainage from these buildings and the two iron buildings and offices now in course of erection, erecting offices for girls and female infants, and providing new water services, fencing and gravelling :—

D. Charteris	£964	W. Harbrow	£892 10
T. Cruwys	930	Croggon & Co., Ltd.‡	345 0
Humphreys, Ltd	920		

WESTMINSTER (Board's Offices).—Providing and fixing cupboard :—

E. Spencer & Co.	£14 0	T. Cruwys*	£12 10

* Recommended for acceptance.
† Accepted.
‡ Tender incomplete.

TO CORRESPONDENTS.

"Subscriber" (we cannot insert tenders sent without name and address. See notice at head of "Tenders").—W. G. B., H. E., (below our limit).—H. C., T. A. B. (amounts should have been stated.

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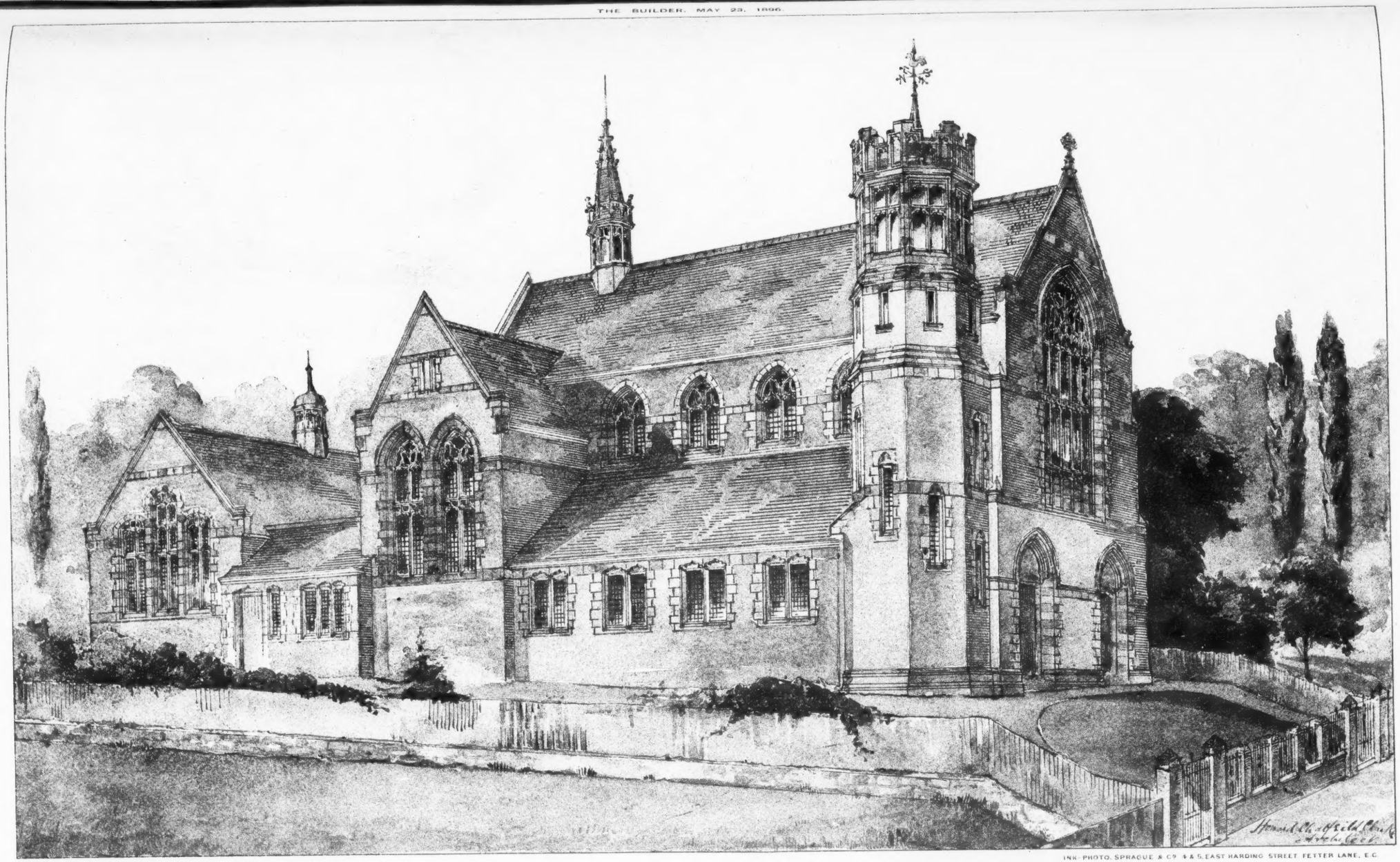

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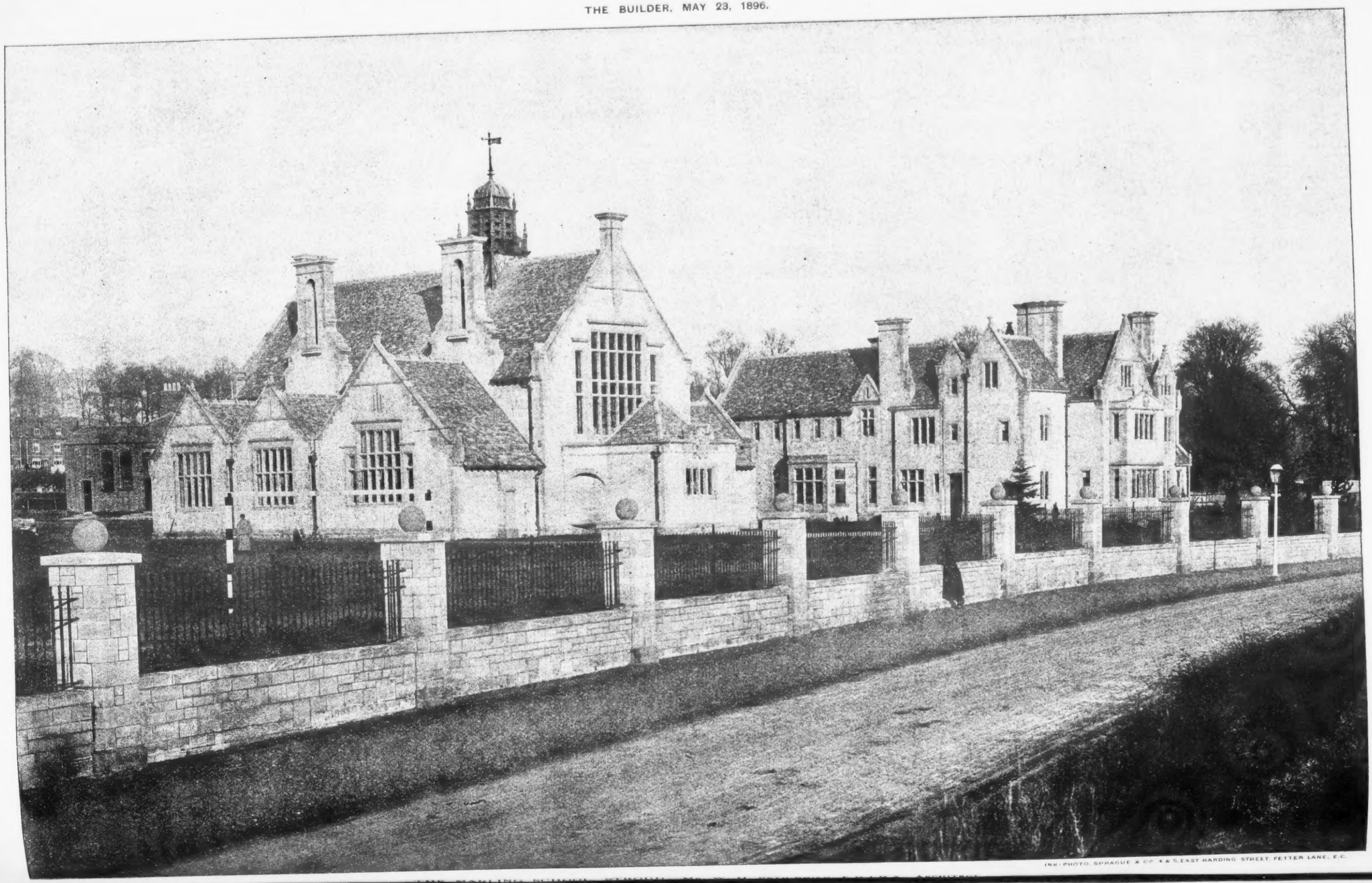
MAIDA VALE AND KILBURN UNITARIAN CHURCH.—Mr H Chatfeild Clarke, Architect



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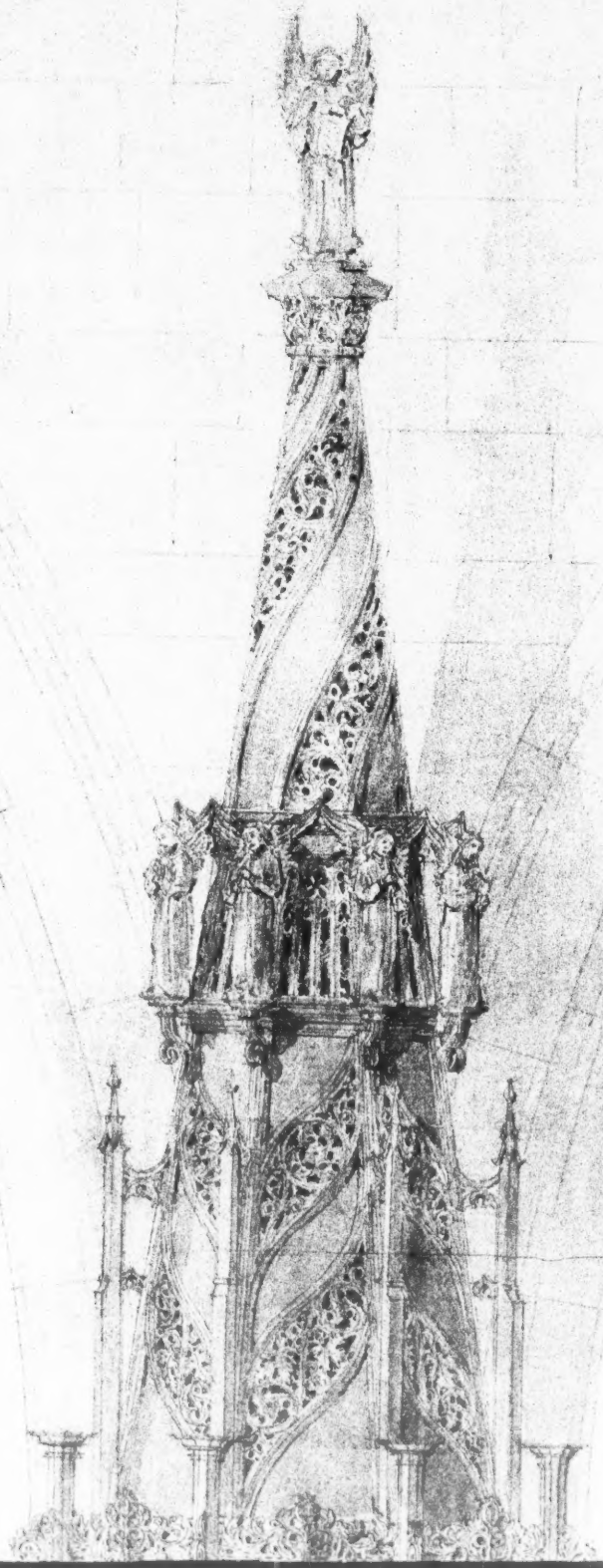

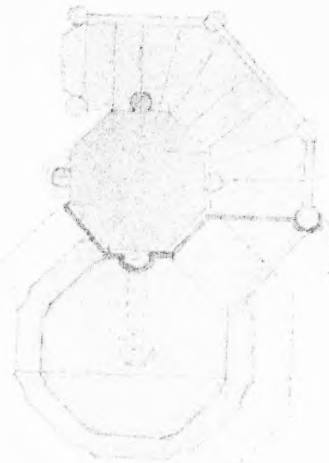

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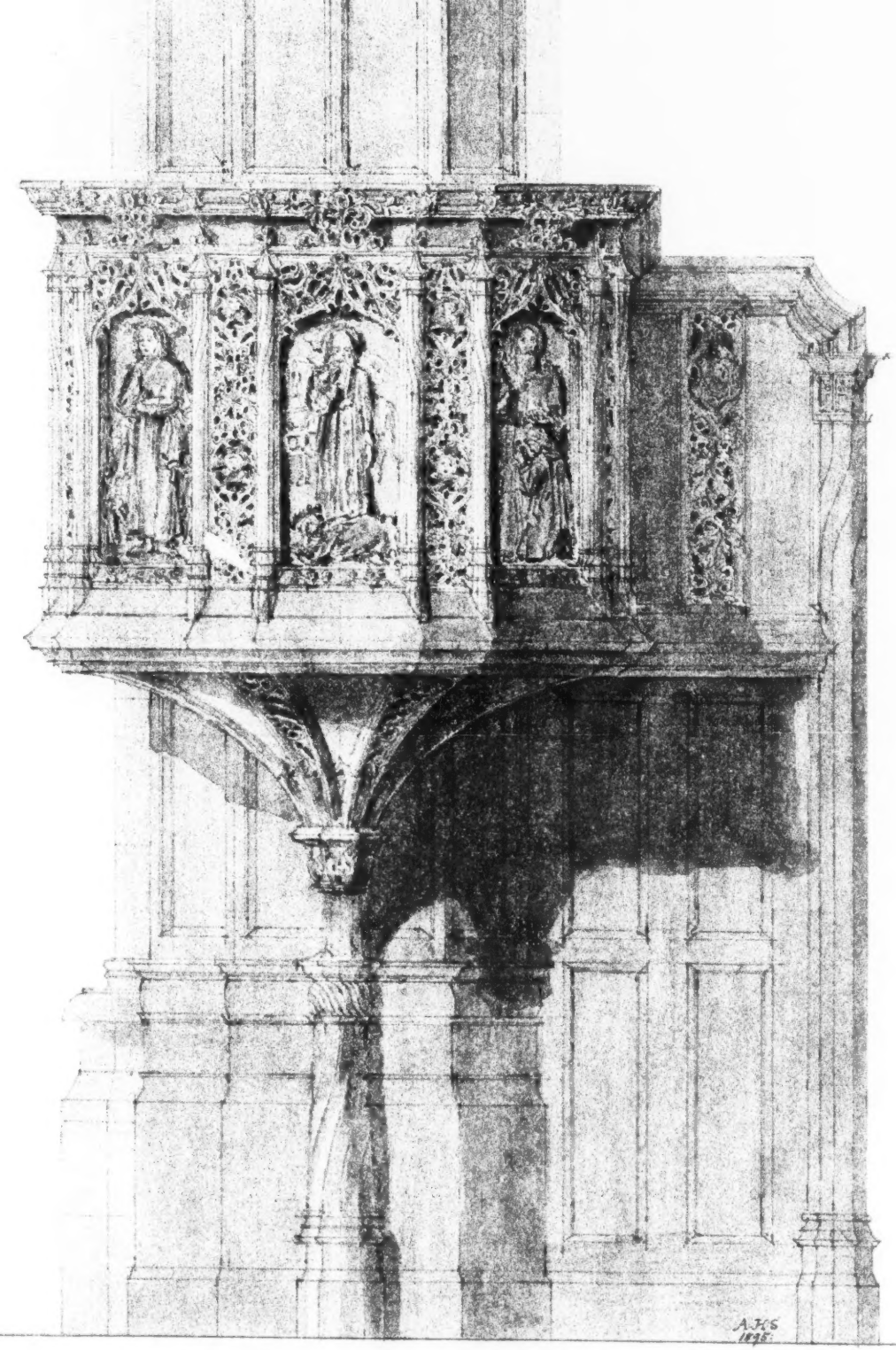

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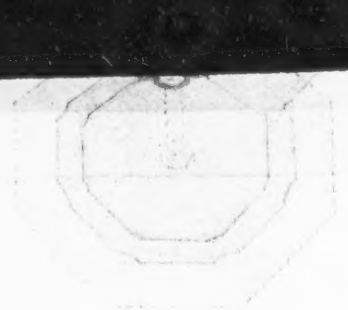

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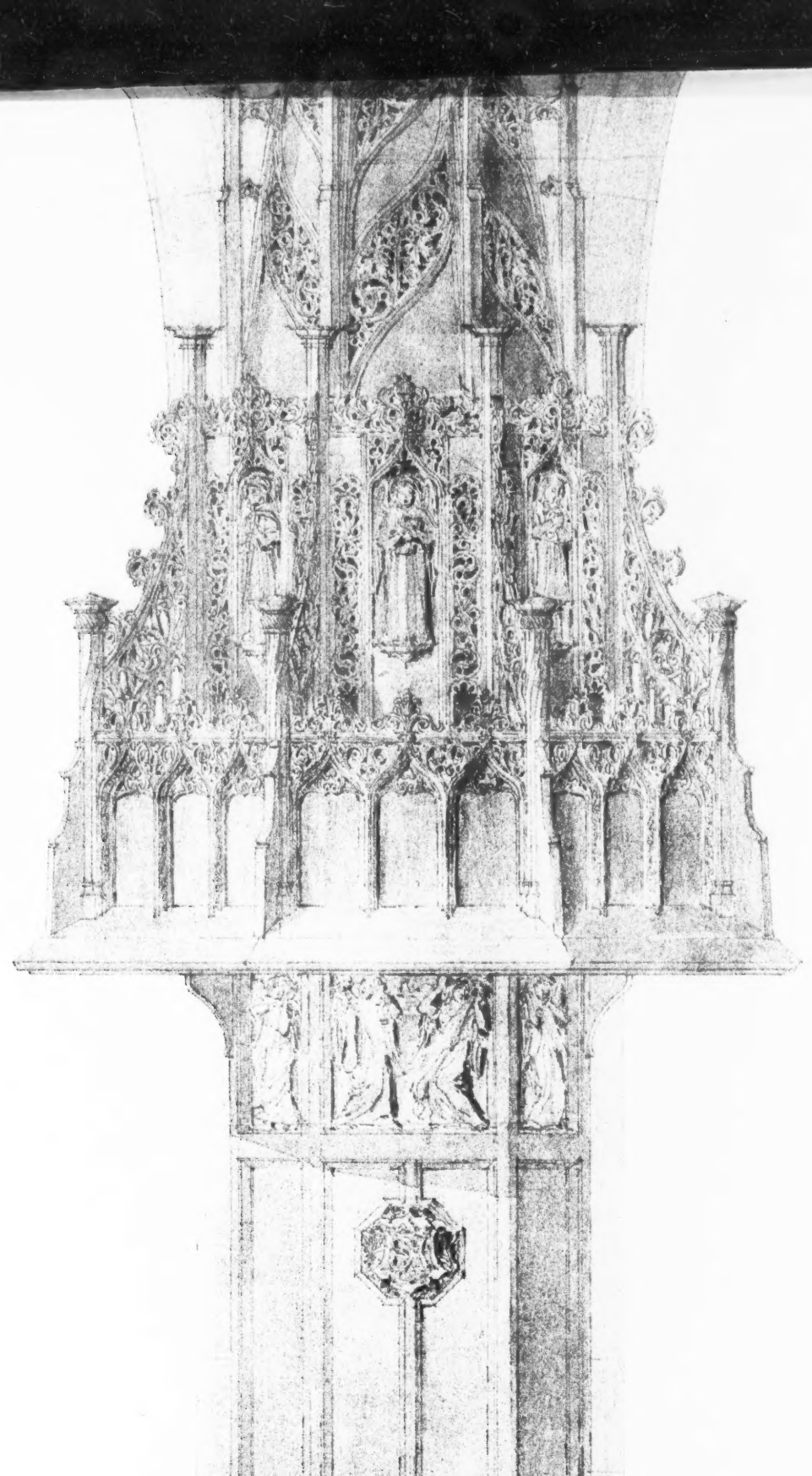

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